

FURTHER NOTES ON AUSTRALIAN COLEOPTERA,
WITH DESCRIPTIONS OF NEW GENERA AND
SPECIES.

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XXXII.

CARABIDÆ.

EUCALYPTOCOLA.

The following species seems to be doubtfully referable to this genus. Its structural characters are : tarsi not bilobed ; scrobes of mandibles present ; postocular prominences of head wanting ; mesosternum narrow between the intermediate coxæ ; head not transversely impressed across occiput ; interstices of elytra glabrous and not punctulate ; claws serrate. It stands by virtue of the above characters in *Eucalyptocola*, in Mr. Sloane's tabulation of the *Lebiid* genera (P.L.S., N.S.W., 1898, pp. 493 and 494). It differs, however, from Mr. Sloane's diagnosis of *Eucalyptocola* in having its elytra only feebly striate, and from an insect sent to me by Mr. Sloane as *E. (Philophlæus) dubia*, Macl., in its prothorax being only narrowly margined so as to resemble the prothorax of *Dromius*. It is much like a *Dromius* in general appearance but differs from that genus not only by its narrow mesosternum but also by its very stout antennæ which are shorter and stouter even than those of *Eucalyptocola dubia*. Its narrowly margined prothorax distinguishes it from *Eucalyptocola* so strongly as to render its right to a place in the genus very doubtful, but if not placed there it must be treated as the type of a new genus and for the present it seems better not to create new *Lebiid* genera in Australia if they can be avoided.

E. marcida, sp. nov. Nitida ; nigro-picea, elytris (fascia post-mediana lata sinuata et utrinque macula parva basali nigris exceptis) sternorum parte mediana coxis pedibusque testaceis, palpis mandibulis antennis et pronoti margine (hoc anguste) rufo-testaceis ; supra lævigata ; prothorace sat transverso, postice quam antice parum angustiori, antice leviter emarginato, longitudinaliter canaliculato, lateribus leviter arcuatis prope basin leviter sinuatis anguste marginatis puncturis setiferis 2 impressis, angulis obtusis ; elytris

subtiliter striatis, striis subtiliter punctulatis, interstitiis planis vix manifeste (sub lente forti) punctulatis. Long., $1\frac{4}{5}$ l; lat., $\frac{4}{5}$ l.

The coloring of the antennæ in the unique type is not quite uniform, the basal two joints being paler, and the third joint darker, than the rest.

Victoria (Glenelg River).

MORPHNOS.

M. Besti, Sl. I have lately met with this species (recently described by Mr. Sloane) at the mouth of the Glenelg River, in the extreme south-west corner of Victoria. Mr. Sloane appears to have seen it only from the Grampian Mountains (Vict.). It was not rare in deep burrows under large stones and logs quite near the sea, and a good deal of digging was necessary to unearth it.

NOTONOMUS.

N. molestus, Chaud. This species is plentiful under stones and logs about the mouth of the Glenelg River, Victoria. Mr. Sloane seems to have it only from the Grampian Mountains.

DYTISCIDÆ.

ANTIPORUS.

A. (Hydroporus) collaris, Hope. Referring to my note on this species to the effect that, though (of existing genera) *Antiporus* seems the best for it to stand in, yet I think a distinct genus should be formed for it, but cannot myself form one for want of a satisfactory specimen for examination; Dr. Régimbart writes me that he confirms my opinion, and I judge from his letter that he will shortly propose a new generic name for the insect, of which he appears to possess a good specimen.

GYRINIDÆ.

MACROGYRUS.

M. (Gyrinus) obliquatus, Aubé. Dr. Régimbart agrees with me that there is not sufficient evidence to justify this species being regarded as Australian.

M. (Dineutes) Gouldi, Hope. Dr. Régimbart answers my query as to the possible identity of this species (which I have not seen) with *M. paradoxus*, Rég., by telling me that he has *M. Gouldi*, and that it is certainly distinct from *paradoxus*, having its elytra genuinely tridentate behind.

M. fortissimus, Blackb. Dr. Régimbart tells me that judging by my description he has no doubt of this species being identical with that which Guérin described as *Gyrinus striolatus*. I had formed the opinion that *G. striolatus* is not a *Macrogyrus*, and

that therefore my insect could not be identical with it. M. Régimbart, however, is able to state definitely that *G. striolatus* is a *Macrogyrus*, and therefore I am satisfied that the name I have used must be regarded as a synonym.

DINEUTES.

D. rufipes, Fab. Dr. Régimbart thinks I am probably right in believing this to be the same species as *D. australis*, Fab.

PALPICORNES.

CERCYON.

C. nigriceps, Marsh. Among some *Coleoptera* collected by Mr. P. Morris in the neighbourhood of Adelaide, and also among some specimens collected by Mr. Dodd near Townsville (Queensland), I have found a *Cercyon* which I cannot separate from this common European species. No doubt it has been introduced.

STAPHYLINIDÆ.

QUEDIUS.

Q. nelsonensis, sp. nov. Apterus (?); gracilis; sat nitidus; piceus, abdomine cupreo-et cœruleo-iridescenti, antennarum articulis basali et apicalibus 2 palpis pedibus et elytrorum basi (hac late) testaceis vel rufo-testaceis; antennis gracilibus minus elongatis, articulis 3^o quam 2^{us} sat longiori, 7°-10° leviter transversis; capite angusto elongato, fere parallelo, quam prothorax multo angustiori, puncturis 3 utrinque prope oculum impresso; oculis sat parvis depressis; prothorace minus transverso, a basi antrorsum fortiter angustato supra puncturis nonnullis prope margines sitis et 2 magnis in disco ante medium sitis impresso; scutello punctulato; elytris brevibus (ad suturam quam prothorax sat brevioribus), sat crebre sat subtiliter punctulatis; abdomine basin versus subtilius sat crebre (hinc retrorsum gradatim minus crebre magis fortiter) punctulatis. Long., $2\frac{1}{2}$ l.; lat., $\frac{1}{2}$ l.

Only three Australian *Quedi* of the section with the head elongate and narrow have been previously described. From them the present species differs by its very small and short elytra (under which I feel sure there are no wings, but as the type is unique and in extremely good condition I am unwilling to risk damage by investigation). Apart from this character the species is very distinct from its allies by the following (among other) characters:—From *œneus*, Fvl., by its very different color and size, and the very sparse puncturation of the hind part of its abdomen; from *cuprinus*, Fvl., by its very different size and color (e.g. the apical two joints of its antennæ testaceous, its elytra bicolorous) and (if I have rightly identified *cuprinus*) its elytra more finely punctulate and antennæ notably more slender; from

baldiensis, Black.—to which it seems nearest—by its much more slender antennæ non-convex eyes (in *baldiensis* the eyes are not strongly but very evidently convex) and much closer puncturation of the basal part of the elytra.

Victoria (Nelson R. District).

Q. baldiensis, Blackb. (Trans. R.S., S.A., 1891, p. 69). I described this species as possibly a variety of *Q. cuprinus*, Fvl. I am now, however, satisfied that it is distinct. The small size and testaceous apical joints of its antennæ in combination are, I think, conclusive in themselves. I have, however, a species before me which agrees well with the description of *Q. cuprinus*, and if it be that insect the puncturation of the elytra of *baldiensis* is very evidently finer than in Fauvel's species.

PHILONTHUS.

P. Glenelgi, sp. nov. Niger, elytris rubris; palporum maxillarium articulo 4^o quam 3^{us} sat longiori; antennis modicis (quam *P. sordidi*, Grav., sat tenuioribus); capite sat angusto, quam latiori sat longiori, inter oculos 2-punctulato, minus convexo; prothorace antice vix angustato, quam latiori manifeste longiori, quam caput vix latiori, supra utrinque puncturis 4 dorsalibus (inter has et marginem lateralem puncturis 2) longitudinaliter impresso, secundum margines puncturis nonnullis seriatim impresso; elytris quam prothorax sat latioribus vix longioribus, subtilius concinne minus crebre punctulatis; abdomine fere ut elytra punctulato. Long., 3 l.; lat., $\frac{1}{2}$ l.

From all the previously described Australian *Philonthi* of the section having the dorsal series of punctures on the pronotum consisting of four punctures, except *ornatus*, Blackb., this species differs by its bright red elytra. From *ornatus* it differs by its larger size, uniformly dark legs and antennæ, much longer antennæ, more finely punctured elytra, &c. Disregarding the colour of the elytra it differs from the others of the section in the following characters *inter alia*;—from *longicornis*, Steph., by its much smaller size, prothorax much less narrowed in front, elytra much less closely punctulate; from *discoideus*, Grav., and *ventralis*, Grav., by its much longer antennæ; from *macellus*, Fvl., by its more elongate head; from all by its antennæ and legs entirely black.

Victoria (Glenelg R. district).

SILPHIDÆ.

CHOLEVA.

C. Macleayi, sp. nov. Angusta; postice angustata; rufoferruginea, elytris interrupte trans partem medianam et pronoti disco infuscatis; confertim castaneo-pubescentis;

capite pronotoque sat subtiliter sat crebre punctulatis; elytris transversim subtiliter crebre punctulato-striatis; antennis elongatis, gracilibus, articulo 8° quam 7^{us} et 9^{us} multo angustiori multo breviori; mesosterno carinato. Long., $1\frac{1}{2}$ l.; lat., $\frac{2}{3}$ l.

The antennæ are manifestly longer than the head and prothorax together. They are a trifle shorter and stouter than those of *C. antipodum*, Blackb. Joint 1 is evidently longer and stouter than 2; 3 scarcely shorter than 1; 4-6 each a little shorter than the one that precedes it; 7 of same length as 6 but evidently stouter; 8 small, its length and width about equal; 9 and 10 about as wide as 7 but slightly shorter; 11 evidently longer than 10. The front tarsi are extremely strongly dilated in the male, the intermediate not at all. In my tabulation of the Australian *Cholevæ* (Tr. R. S., S. A., 1891, p. 89) this species falls beside *C. antipodum*, from which it differs *inter alia* by the transverse sculpture of its elytra.

Victoria.

C. victoriensis, Blackb. Since I described this species I have met with it in Tasmania

C. australis, Er. The Adelaide *Choleva* referred to in Tr. R. S., S. A., 1891, p. 87, as probably this insect seems to have been correctly named, as I have since taken the same species in Tasmania (the original locality).

COLON.

C. melbournense, Blackb. Since I described this species I have taken a *Colon* in Tasmania which does not seem to differ from the type except in its uniform castaneous coloring.

CHOLEVOMORPHA.

Notwithstanding the general resemblance of this genus to, and the really close agreement of most of its characters with, *Choleva*, it nevertheless seems to me to be a very isolated form intermediate between the *Silphides* and the *Anisotomides*. In my diagnosis of the genus I called its tibiæ "spinosa," and I think this phrase capable of misapprehension. In using it I referred to a row of fine erect spines which run down the external margin of the tibiæ, rising from the pubescence with which those organs are clothed. In reality the tibiæ are very much like those of a *Choleva* and very different from that of an *Anisotoma*.

CHOLEVOMORPHA.

C. Koebelei, sp. nov. Sat late ovalis; sat convexa; subtiliter sublineatim pubescens; nitidus; ferrugineus, antennis apicem versus et elytrorum postice disco infuscatis; antennis gracilibus, clava 5-articulata, articulis 7°—10° piceis, 11° dilu-

tiori, 8° parvo vix transverso, 7° 9° 10° que quam latioribus parum longioribus; prothorace fortiter transverso, antice angustato, supra vix manifeste punctulato; elytris transversim subtiliter punctulato-striatis, stria subsuturali profunde impressa.

Maris tarsis anticis 3-unguiculatis, ungue intermedia brevi triangulari; feminae tarsis 2-unguiculatis. Long., 11.; lat., $\frac{2}{3}$ l. (vix).

This species is clearly congeneric with the extraordinary insect on which I founded the genus *Cholevomorpha*. It is much smaller and very differently colored, but agrees with it in structural characters; having most of the characters (including the exposed metathoracic episterna), as well as the general appearance of *Choleva*, but in combination with hind trochanters quite small and placed as in the *Anisotomides*. Like *C. picta* this species has three claws on the front tarsi of the male, but they are extremely small—one of the external claws much smaller than the other, and the intermediate claw of very different shape appearing as a small triangular projection between the other two.

Queensland (Mr. Koebele, Cairns).

C. atropos, sp. nov. Fem. Sat late ovalis; sat convexa; subtiliter sublineatim pubescens; nitidula; nigra, antennis (his ad basin testaceis) pedibusque piceo-rufescentibus; antennis modice gracilibus, clava 5-articulata, articulis 8°-10° manifeste transversis, 8° parvo; prothorace fortiter transverso antice angustato, vix manifeste punctulato; elytris transversim sat fortiter punctulato striatis, stria subsuturali profunde impressa. Long., $\frac{4}{5}$ l.; lat., $\frac{1}{2}$ l. (vix).

This minute insect is evidently a *Cholevomorpha*, but as my unique specimen is a female I am unable to describe its sexual characters. It differs from the two previously described species *inter alia* in size and coloring, in its more conspicuously clubbed antennae (some of the joints of which are decidedly transverse) and in the much coarser sculpture of its elytra.

Victoria.

C. (?) extranea, sp. nov. Fem. Minus late ovalis; sat convexa; parcius pubescens; sat nitida; picea, antennis pedibus abdomine et elytrorum pleuris plus minusve rufescentibus; antennis modice robustis, apicem versus gradatim magis incrassatis, articulo 8° quam 7^{us} et quam 9^{us} sat minori leviter transverso, articulis ceteris haud vel vix transversis; corpore supra sat æqualiter fortiter vix crebre punctulato; prothorace fortiter transverso, postice leviter (antice fortiter) angustato, stria subsuturali vix perspicua; corpore subtus sat fortiter punctulato. Long., 1 $\frac{3}{5}$ l.; lat., $\frac{1}{2}$ l.

I have some hesitation in referring this insect to *Cholevomorpha* rather than founding a new genus for it. Unfortunately I have not seen the male. I do not find in the female any good structural character to distinguish it from *C. picta*—though it is very different superficially, but not more so, I think, than are some *Choleve* from others. It agrees with *C. picta* in being of decidedly *Cholevid* rather than *Anisotomid* type in general (in respect e.g., of the antennæ, metasternal epimera, style of sculpture), but has hind trochanters of the *Anisotomid* type. Its elytral suture is considerably raised (except near the base) as in the previously described *Cholevomorpha*, but without the strong subsutural stria that is found in them. It is *inter alia multa* very different from them by the coarse, evenly distributed puncturation of its upper surface which is not in the least seriate. Its antennæ are notably stouter than those of its described congeners, especially the first six joints, in consequence of which the apical five joints form a much less conspicuous club. Its tarsi, too, are distinctly shorter and stouter, and the fine spines on its tibiæ are shorter, less fine, and less erect.

S. Australia ; under decaying leaves.

CLAMBUS.

C. tropicus, sp. nov. Minus brevis ; postice angustatus ; nitidus ; supra (exemplo typico observato) glaber ; obscure rufus, antennis (clava inclusa) pedibusque (posticis haud observatis) pallide testaceis ; elytris postice sparsissime minus subtiliter punctulatis, stria subsuturali nulla. Long., $\frac{1}{2}$ l. (vix).

I have not been able to examine the antennæ and hind legs of this minute insect sufficiently in detail to give a full description of them, as I have only a single specimen. The upper surface is practically glabrous, but under a microscope I find one or two short erect setæ close to the lateral margin of the elytra, which perhaps indicate that the example before me is abraded ; a fresh specimen certainly cannot have more than extremely scattered setæ. This species differs from *C. Tasmani*, Blackb., and *C. tierensis*, Blackb., in the absence of a subsutural elytral stria, and from *Simsoni*, Blackb., by the very evidently more sparse puncturation of its elytra.

Queensland ; Cairns (Mr. Cowley).

SCAPHIDIIDÆ.

SCAPHISOMA.

This genus seems to be numerously represented in Australia. The species as yet described stand under five names, none of which are connected with descriptions sufficiently detailed to allow of confident identification. The two descriptions of Sir W.

Macleay are of such a kind that they can only be disregarded. Read literally, I have certainly seen no species that they could apply to, one (*S. politum*) being indicated as devoid of puncturation, and the other (*S. punctipenne*) as having the elytra "rather thickly punctured," the size of the latter being given as $\frac{1}{3}$ l., which indicates it as much smaller than any *Scaphisoma* that I have seen. I must pass them by with the expression of a doubt whether they belong to the genus. The other three species were described by Reitter in brief terms, dealing only with the coloring, the form of the subsutural stria, and the general character of the puncturation. In respect of one of these (*S. bifasciatum*) the puncturation is dismissed with the remark "subtilissime punctatum" (applied to the whole insect); another (*S. Gestroi*) is said to have the elytra (apparently the whole elytra) "dense punctata," while the third (*S. Albertisi*) is said to have elytra "dense subtiliter punctata." I have seen no *Scaphisoma* with puncturation which any of the above designations would even approximately characterise; and as, moreover, the coloring of all Reitter's species differs considerably from that of all the species before me, I must conclude that they are all unknown to me.

S. queenslandicum, sp. nov. Late ovale; nitidum; glabrum; nigrum, antennis (his apicem versus infuscatis) palpis pedibus abdomine et pygidii parte postica rufis vel testaceis; capite pronotoque lævibus; elytris antice sparsissime vix perspicue (juxta suturam et ultra medium gradatim magis crebre magis perspicue, prope apicem fere ut *S. agaracini*, Leach) punctulatis, stria subsuturali subtili antice extrorsum versa et sat longe continua; metasterno antice convexo lævi, postice perspicue punctulato, versus apicem foveis 2 sat approximatis leviter impressis, his sulco subtili conjunctis; segmento ventrali basali antice sulco transverso profundo impresso. Long., 1 l.; lat., $\frac{1}{2}$ l.

This species is somewhat closely allied to *S. novicum*, Blackb. It is a little larger, without testaceous coloring in the apical part of the elytra, the subsutural elytral stria much less strong, the front part of the elytra (except close to the suture) not distinctly punctulate, the front part of the metasternum not punctulate, the abdomen bright red. The impressions on the metasternum and basal ventral segment are perhaps sexual.

Queensland; Cairns (Mr. Cowley).

S. perelegans, sp. nov. Late ovale; nitidum; glabrum; nigrum, capite antice prothoracis lateribus (late) margineque antico (anguste) elytris (basi, suturæ parte antica dimidia, fascia submediana angulata, et macula subapicali parva, nigris vel piceis exceptis) pygidio palpis coxis pedibus et in corpore

subtus maculis nonnullis testaceis, antennis (basi testacea excepta) fusco-brunneis; capite prothoraceque sat lævibus; elytris antice sparsim subtiliter (nullo modo obsolete) postice gradatim minus subtiliter vix magis crebre punctulatis, stria subsuturali profunde impressa antice extrorsum vix versa. Long., 1 l.; lat., $\frac{1}{2}$ l.

My unique example of this insect is unfortunately not in condition to render advisable the manipulation that would be required to remove it from the gum in which it is deeply imbedded and clean it sufficiently for an examination of the puncturation of its sterna. Its colour and markings are however so entirely different from those of any previously described Australian *Scaphisoma* that it is very easily recognizable. The puncturation of the front part of its elytra is much more distinct than in either *S. novicum*, Blackb., or *queenslandicum*, Blackb. (it is as strong as in the European *S. agaricinum*, Leach).

Victoria.

S. fernshawense, sp. nov. Ovale, modice latum; nitidum; glabrum; brunneo-testaceum, elytris maculis 2 (altera humerali, altera subapicali) nigris sat magnis ornatis, sternis abdomineque (hujus apice excepto) piceis, antennis (basi testacea excepta) obscurioribus; capite prothoraceque sparsim subtiliter (nullo modo obsolete), elytris grosse minus crebre inæqualiter (hic et illic seriatim), punctulatis; horum stria subsuturali profunde impressa fortiter punctulata, antice extrorsum versa et longe arcuatim continua; meta sterno in medio subtiliter (latera versus grosse) punctulato. Long., 1 l.; lat., $\frac{1}{2}$ l. (vix).

Very distinct from all the previously described Australian *Scaphisomata* by the extremely coarse puncturation of its elytra, which is intermingled with somewhat less coarse puncturation and here and there runs in rows, especially near the suture and lateral margins. The subsutural stria in front is continued in a curved row of punctures and merges into a discal row of coarse punctures that runs obliquely backward and almost meets the subsutural stria at the apex of the elytra. There are some rather coarse punctures along the base of the pronotum.

Victoria, Fernshaw.

S. novicum, Blackb. The examination of fairly numerous specimens of *Scaphisoma* that have come under my observation since I described this species has led me to doubt whether the specimen whose characters are set down in my description as those of the male is really conspecific with those on which the rest of the description was founded. I have no evidence of similar sexual characters in any other species, and moreover I

have much doubt whether the immature specimen in which I found the character that I mentioned as those of the male could even with maturity have reached the dark colors described as those of *novicum*. On the whole, therefore, it will be best to consider the authenticity of my statement of the sexual characters of the male of *S. novicum* as needing confirmation.

TABULATION OF SPECIES OF SCAPHISOMA.

- A. Puncturation of elytra more or less fine, and chiefly in the hind part of the elytra.
- B. Elytra uniformly (unless rufous at apex) black.
- C. Disc of elytra scarcely punctulate in front (abdomen bright red) ... *queenslandicum*, Blackb.
- CC. Disc of elytra very distinctly punctulate in front (abdomen obscure) ... *novicum*, Blackb.
- BB. The whole upper surface testaceous with sharply defined black markings ... *perelegans*, Blackb.
- AA. Puncturation of elytra extremely coarse and sparse over the whole surface ... *fernshawense*, Blackb.

SCIATROPHES (gen. nov. *Scaphidiidarum*).

Oculi minores, sat convexi, integri; caput antice elongatum angustatum; antennæ 11-articulatæ, graciles, elongatæ, articulis basalibus 2 brevibus incrassatis 3^o—6^o elongatis subtilibus 7^o quam hi manifeste crassiori parum longiori 8^o quam 7^{us} sat breviori sat graciliori 9^o—11^o quam 7^{us} parum longioribus sat crassioribus (clava laxè articulata, modice perspicua); scutellum haud manifestum; elytra postice truncata, abdomen haud tegentia; prosternum ante coxas brevissimum; coxæ anticæ contiguæ, intermediæ inter se modice separatæ, posticæ inter se sat late distantes; metasterni episterna angusta; abdominis segmenta basale elongatum, 2^{um}—4^{um} brevina, 5^{um} elongatum conicum; pedes modici, tarsi sat brevibus 5-articulatis, posticis quam tibiæ dimidium parum longioribus.

The species for which I propose this new generic name is near *Scaphisoma* but cannot be placed there on account of its much shorter tarsi, and much narrower metasternal episterna. Its antennæ, moreover, are of structure somewhat different from those of any *Scaphisoma* known to me. Their club is five-jointed strictly speaking, but its first joint is so slightly enlarged in comparison with the apical three, that to a casual glance it seems to be only three-jointed. The eyes are smaller and more convex than in *Scaphisoma*.

S. latens, sp. nov. Scaphiformis; nitidus; glaber; supra nigropiceus versus latera apicemque rufescens, pygidio testaceo, corpore subtus rufo-piceo, antennarum basi palpis pedibusque testaceo-rufis; capite pronotoque lævibus; elytris antice

sparsim sat obsolete (postice gradatim magis perspicue, prope apicem nullo modo obsolete) subtiliter punctulatis, stria subsuturali profunde impressa antice extrorsum versa et sat longe continua. Long., $\frac{3}{8}$ l.; lat., $\frac{2}{3}$ l. (vix).

The structural characters have been indicated under the heading of the genus. The facies is much like that of *Scaphisoma* but the body is more narrowed hindward from slightly behind the front of the elytra than in any *Scaphisoma* known to me.

Victoria; Dividing Range. In a fungus deeply imbedded in a hollow log.

HISTERIDÆ.

HOLOLEPTA.

H. australica, Mars. I presume that this is the species referred to by Mr. Lea (P.L.S., N.S.W., 1897, p. 585) under the name *H. "australis*, Mars." By some oversight the name was printed *australis* in Masters' catalogue, from which apparently Mr. Lea adopted it; but de Marseul does not appear to have described any *Hololepta* under the name *australis*.

TRYPANÆUS.

This genus is attributed to Australia in Masters' Catalogue, a species "*Somerseti*, Mars., Ann. Mus. Gen., 1879, p. 281", being quoted. On reference to the memoir cited I find that on p. 281 there is a *Teretrius Somerseti*, which is unquestionably a *Teretriosoma*, nor can I find any *Trypanæus Somerseti* in the memoir. The genus *Trypanæus*, therefore, appears to have been erroneously attributed to Australia.

PAROMALUS.

I am afraid it is almost impossible to identify with any certainty the four Australian species of this genus described by De Marseul without a comparison of specimens with the actual types. I have received from Mr. Lea examples bearing the names of three of them, and I believe that gentleman has been in correspondence with Mr. Lewis, and has received information from him regarding nomenclature. It is, therefore, likely that the specimens sent me were named by Mr. Lea by comparison with specimens named by Lewis. As, however, they do not agree with De Marseul's descriptions, and two of them are from localities widely separated from those of De Marseul's types (while of the third De Marseul does not seem to have known the habitat exactly), I cannot consider the identification conclusive. I, however, must accept the names provisionally, as there is a possibility that they may have been ascertained definitely by Lewis to agree with the types in spite of divergence from the

descriptions. The following are notes on these named specimens, and on the fourth of De Marseul's species.

P. umbilicatus, Mars. Specimens before me are from W. Australia; the type was from Sydney. The specimens before me differ from description *inter alia* by the extremely well-defined puncturation of their metasternum, which should be "almost invisible." The pygidium is quite differently sculptured, but this is possibly sexual.

P. Victoria, Mars. Specimens before me are from N.S. Wales; the type was from Victoria. The specimens differ from description *inter alia* in the puncturation of the elytra being very much finer and closer than is indicated by De Marseul's expression "grosse espacée, et de points oblongs," and in the stria-surrounded area of the pygidium in the female being (not "triangular" but) oval.

P. miliaris, Mars. Specimens before me are from W. Australia, whence I have other examples than those received from Mr. Lea; De Marseul gives merely "N. Hollande" as the habitat. The specimens I have under observation have no unevenness on the pygidium, but this discrepancy may be sexual. Otherwise, however, *inter alia* their elytra are particularly finely and closely punctulate, whereas De Marseul says of the elytra of *miliaris* "couvertes de points forts et assez serrés."

P. honoratus, Mars. This species is very briefly described, but cannot be identical with either of the species (from the same habitat—tropical Queensland) described below, as it is said to have the stria of the head interrupted in front. My specimens and De Marseul's type appear all to be females, as they have the sculpture of the pygidium said to be characteristic of that sex. If so they are very distinct species, as the details of that sculpture are quite different *inter se* in all three.

The following tabulation shows the distinctive characters of the *Paromali* before me. I have retained Mr. Lea's names, with a query—the name in each case being applied to the specimens indicated in the above notes, and very probably not representing the species to which De Marseul gave the names. I have not included *honoratus*, as the description does not furnish the necessary information. It differs from all those tabulated except *miliaris* in the absence of a stria across the front of the epistoma.

- | | | |
|------------------------------------------------------------------------------------------|-----|-------------------------------|
| A. Metasternum deeply longitudinally concave,
in its whole length, on either side ... | ... | <i>saucius</i> , Blackb. |
| AA. Metasternum with the disc perfectly flat ... | ... | <i>Terra-reginæ</i> , Blackb. |
| AAA. Metasternum evenly convex (or nearly so)
in respect of its general surface. | ... | |
| B. Two short adjacent furrows on the meta-
sternum close to its front ... | ... | <i>Ludovici</i> , Blackb. |
| BB. The metasternum without depressions. | | |

- C. The metasternum impunctulate, except at the postero-external corners *Victoriæ* (? Mars.)
 CC. The general surface of the metasternum very distinctly punctulate.
 D. The puncturation of the metasternum very sparse *umbilicatus* (? Mars.)
 DD. The puncturation of the metasternum close *miliaris* (? Mars.)

P. saucius. Fem? Ovals; minus convexus; sat nitidus; niger, antennis pedibusque ferrugineis; capite crebre subtiliter punctulato, stria antice continua recta instructo; prothorace transverso antice angustato, supra crebre subtilius punctulato, trans marginem apicalem stria subtilissima (hac cum stria laterali vix continua) impresso; elytris sat crebre sat fortiter (antice versus suturam multo magis subtiliter) punctulatis, striis 2 dorsalibus minus perspicuis postice abbreviatis et stria subsuturali apicali brevissima instructis; propygidio pygidioque subtilissime punctulatis, in hoc area transversim ovali stria continua circumcincta (hac area postice fovea profunda impressa); prosterno utrinque striato; mesosterno antice arcuatim emarginato, transversim stria impresso, hac ad fines obtuse angulata et retrorsum continuata; metasterno fere lævi, utrinque late longitudinaliter sulcato, sulco in segmento basali ventrali (hoc distincte sparsim punctulato) continuo; tibiis anticis extus minute 4-dentatis. Long., 1 l.; lat., $\frac{1}{2}$ l.

Very distinct from the other described Australian *Paromali* by the wide sulcus longitudinally impressing either side of the metasternum and continued on the basal ventral segment; also by the characteristic sculpture of its pygidium. I have seen five specimens of this insect which do not seem to differ sexually *inter se*.

N. Queensland (Mr. Koebele).

P. Terræ-reginæ, sp. nov, Fem? Ovals; sat latus; sat depressus; nitidus; niger, antennis pedibusque obscure ferrugineis; capite crebre subtiliter punctulato, stria antice continua recta instructo; prothorace transverso antice angustato, supra subtilius sat crebre punctulato, stria submarginali pone caput vix perspicua; elytris sat crebre vix fortiter (antice versus suturam magis subtiliter) punctulatis, striis dorsalibus 2 et stria subsuturali apicali brevissima vix perspicue impressis; propygidio perspicue, pygidio vix perspicue, punctulatis; hoc in medio sulco profundo transversali (certo adpectu literam M latissimam simulanti) impresso; prosterno inter coxas sat lato, utrinque striata; mesosterno antice arcuatim emarginato, transversim stria impresso, hac ad fines obtuse angulata et retrorsum con-

tinuata; metasterno fere lævi, parte mediana valde insigniter planata; segmento ventrali basali utrinque impresso; tibiis anticis externe 4-dentatis. Long., $\frac{3}{4}$ l.; lat., $\frac{2}{5}$ l. (vix).

This minute species does not differ greatly on its general upper surface from the preceding (*P. saucius*, Blackb.) but is smaller and a little wider and more depressed, with the sculpture a trifle feebler. Its prosternum is evidently wider and its metasternum and pygidium are entirely differently sculptured.

N. Queensland (Mr. Cowley).

TRIBALUS.

This name is printed "TRIBALLUS" in Masters' Catalogue. I have not Erichson's original diagnosis for reference, but I find it called *Tribalus*, Er., by Lacordaire, de Marseul, and Lewis. De Marseul gives a derivation for the word as he spells it which involves a quite different meaning from that of *Triballus*.

SAPRINUS.

The species of this genus that have been recorded as found in Australia (including *Gnathoneus*, which De Marseul regarded as a subgenus of *Saprinus*) appear under 14 names. Of these the following are not sufficiently described for identification:—*ater*, Macl.; *australis*, Boisd.; *gayndahensis*, Macl.; and *Mastersi*, Macl. I have an example of *S. ater*, named on the extremely reliable authority of Mr. Masters, which does not seem to differ, except somewhat in color, from Northern Australian specimens that I have no doubt are *S. speciosus*, Er. It is impossible even to guess at the identity of *S. australis*. The description of *S. gayndahensis* does not show any distinction from *S. cyaneus*, Fab. *S. Mastersi* may be a good species; I cannot fit the description to any species before me, but it is too vague for any certainty.

Between *S. cyaneus* and *S. latus* there seems to be almost inextricable confusion. As far as I can see the earliest use of both names was for the same insect, viz.:—*cyaneus*, Fab. (1775) and *latus*, Er. (1834). But in the interval Paykull (1811) described a different *Saprinus* under the name *cyaneus*, and Erichson (1834) also described it under the same name. Still later De Marseul (1853) described it under the name *latus*, Er., and then (1859) stated that he had examined the type of *S. latus*, Er., and discovered that it was not the insect he had described under that name, but was identical with what he regarded as *cyaneus*, Fab.

This leaves *S. cyaneus*, Payk., without a name, inasmuch as *S. latus* applied to it by De Marseul was a nom. præocc., being (at the time De Marseul used it) a synonym of *S. cyaneus*, Fab. I propose (below) the name *Australasiae* for the *Saprinus* de-

scribed by De Marseul under the name *lætus*, Er. (Ann. Soc. Ent., Fr., 1853, p. 388) and subsequently (loc. cit., 1859, p. 444) stated by him not to be Erichson's species

No tabulation has yet been published, I think, of the Australian species of this genus except that of De Marseul in 1853, where the few Australians then known were placed among their congeners from other countries. In furnishing a tabulated statement below of the species known to date I have thought it well to include the whole of the *Saprinini* in one tabulation, as the three genera other than *Saprinus* contain only 5 known Australian species among them.

TABULATION OF THE AUSTRALIAN SAPRININI.

- A. Front tibiæ slender and falciform (SAPRINODES) *falcifer*, Lewis.
 AA. Front tibiæ of normal form (compressed, not falciform).
 B. Head not having a frontal carina.
 C. Elytra with a well defined subsutural stria (SAPRINUS).
 D. Prosternum with marginal striæ.
 E. Subsutural elytral stria not continuous with fourth dorsal.
 F. Fourth dorsal stria not, or but feebly, arched at base towards suture.
 G. Mesosternal stria complete across the front of the segment ... *speciosus*, Mars.
 GG. Mesosternal stria non-existent in front ... *viridanus*, Lewis.
 FF. Fourth dorsal stria arched at base towards suture.
 G. Third dorsal stria not, or but little, shorter than second.
 H. Interstices of the dorsal striæ entirely (or for the most part) conspicuously punctulate.
 I. These interstices entirely punctulate (lateral punctured area of pronotum continuous or nearly so) ... *cyanelus*, Mars.
 II. Interstice between second and third dorsal elytral striæ punctured only near base (lateral punctured area of pronotum strongly abbreviated behind) ... *westraliensis*, Blackb.
 HH. Interstices of dorsal elytral striæ punctureless... *tyrrhenus*, Blackb.
 GG. Third dorsal stria of elytra very much shorter than second.
 H. The fourth dorsal stria shorter than third ... *cyaneus*, Fab.
 HH. The fourth dorsal stria very much longer than third ... *tasmanicus* Mars.
 GGG. The four dorsal striæ of elytra all elongate ... *Australasica*, Blackb.

- EE. Subsutural elytral stria continuous with fourth dorsal ... *ripicola*, Mars.
 DD. Frosterium devoid of marginal striae.
 E Front tibiae with five teeth externally ... *irinus*, Mars.
 EE. Front tibiae with only four teeth externally ... *viridipennis*, Lewis.
 CC. Elytra having no (or scarcely a trace of a) subsutural stria (GNATHONCUS) ... *incisus*, Er.
 BR. Head with a frontal carina (HYP CACCUS) ...
 C. External subhumeral stria of elytra wanting.
 D. Humeral stria of elytra bifid behind ... *piscarius*, Blackb.
 DD. Humeral stria of elytra not bifid behind ... *sine*, Mars.
 CC. External subhumeral stria of elytra well defined and deep ... *vernulus*, Blackb.

S. tyrrhenus, sp. nov. Nitidus; obscure purpureus, antennis pedibusque obscure brunneis; capite laevi, stria frontali integra; prothorace transverso, supra in disco laevi (latera versus, sed a margine sat procul, fortiter vix crebre punctulato, area punctulata postice fortiter abbreviata), stria marginali integra; elytris pone humeros sat fortiter dilatatis, in parte dimidia (vel etiam plus quam dimidia) postica subtilius vix crebre punctulatis, striis dorsalibus 1—3 elytra media fere attingentibus (4^a ut arcus brevis basalis visa), stria suturali antice abbreviata, humerali ultra medium interrupte extensa, subhumerali brevi basali, interstitiis laevissimis; pygidio modice convexo, subtilius sat crebre aequaliter punctulato; prosterno sat plano, stria marginali integra; mesosterno fortiter transverso, stria integra; sternis (sutura crenulata excepta) laevibus; tibiis anticis extus 5-dentatis, dentibus superioribus 2 parvis (inferioribus 3 magnis acutis). Long., 2 l.; 1 $\frac{1}{3}$ l.

This small species in the striation of its elytra resembles *S. cyanellus*, Mars., near which would be its place in De Meuse's tabulation referred to above, but from which it differs, *inter alia*, by the extremely nitid and punctureless interstices of its elytra and by the very different armature of its front tibiae.

N.S. Wales; Tolarno (Miss Carnie).

S. westraliensis, sp. nov. Nitidus; obscure viridis, antennis pedibusque brunnescentibus; capite obsolete punctulato, stria marginali integra; prothorace transverso, supra in disco laevi (latera versus, sed a margine sat procul, fortiter vix crebre punctulato, area punctulata postice fortiter abbreviata), stria marginali integra; elytris pone humeros rotundato-dilatatis, in parte dimidia (vel potius minus quam dimidia) postica subtilius sat crebre punctulatis, striis dorsalibus 1—2 elytra media attingentibus (3^a paullo breviori, 4^a ut arcus brevis basalis visa), stria suturali antice abbreviata, humerali ultra medium extensa, subhumerali brevi

basili, interstitiis 1^a 2^a que totis (3 antice) punctulatis; pygidio modice convexo, æqualiter minus subtiliter sat crebre punctulato; prosterno minus convexo, stria marginali fere integra (basin vix attingenti); mesosterno stria marginali integra impresso; sternis sat lævibus; tibiis anticis extus 7-dentatis, dentibus a femore deorsum ad sextum gradatim majoribus (6^o nullo modo magno, 7^o quam 6^{us} paullo minori). Long., 2 $\frac{2}{3}$ l.; lat. 1 $\frac{1}{3}$ l.

This species would fall beside *S. cyanellus*, Mars., in that author's tabulation (cited above). From *S. tyrrhenus*, Blackb. (which is also near *cyanellus*) it differs, *inter alia*, by the armature of its front tibiæ and by the puncturation of its elytral interstices. From *S. cyanellus* it differs, *inter alia*, by its uniform dark-green color, by the interstice between the second and third elytral striæ being punctulate only at the extreme base, and by the lateral punctulate area of the pronotum being a narrow strip separated from the lateral margin by an interval almost of its own width and also widely separated from the basal margin of the segment. In the last named character it agrees with *S. tyrrhenus*. In the typical unique example there are distinct traces of a dorsal stria on the hinder part of each elytron placed so as to appear like an apical continuation of the third stria after a wide interruption.

W. Australia.

S. viridicupreus, Blanch. The description of this species suggests identity with *S. speciosus*, Er.

S. viridipennis, Lewis. I have specimens from Central Australia of a *Saprinus* which seems to differ from *S. viridipennis* only by its very much more strongly punctulate elytra and its smaller size (Long., 2 $\frac{1}{3}$ l.). As careful comparison reveals no other difference I suspect that the distinction is sexual.

S. Australasie, sp. nov. I propose this name for *S. lætus*, Mars. (nec Er.), the synonymy of which will stand, I think, as follows

S. Australasie, Blackb.
cyaneus, Payk. (nec Fabr.)
lætus, Mars. (nec Er.)
cyaneus, Er. (nec Fabr.)

S. cyaneus, Fab. The synonymy of this species appears to be
S. cyaneus, Fab, Mars.
lætus, Er.

HYPOCACCUS.

Of this genus (Groupe VI. of *Saprinus* according to De Meuse), not hitherto reported as Australian so far as I know, I have several species before me. One of them agrees fairly well

with De Marseul's description of his *H. (Saprinus) sinæ* (from China), under which name I have received it from Mr. Lea, probably on the authority of Mr. Lewis. The following species seem to be new

H. piscarius, sp. nov. Nitidus; nigricans, parum ænescens, antennis pedibusque brunnescentibus; fronte carinata, sulcis 2 angulatis; prothorace transverso, antice parum angustato, supra antice et latera versus in area lata (hac marginem fere attingenti)—postice angusta—sat fortiter minus crebre punctulato, stria marginali integra; elytris in partibus duabus posterioribus (lateribus exceptis) sat fortiter vix crebre punctulatis, striis validis, 1—4 dorsalibus ad medium abbreviatis inter se sat æqualibus, 4^a ad basin arcuatim cum suturali integra coeunti, subhumerali externa nulla interna sat late disjuncta, humerali postice bifida; pygidio minus crebre punctulato; prosterno antice spatuliformi, striis approximatis parallelis fere integris; mesosterno marginato, lævi; tibiis anticis extus 6-dentatis. Long., $1\frac{1}{2}$ — $1\frac{4}{5}$ l.; lat., $\frac{4}{5}$ — $1\frac{1}{10}$ l.

Resembling the species referred to above as *H. sinæ*, Mars., but less brassy, of wider build, with the elytra more dilated behind the shoulders, the punctures about the sides of the pronotum larger and less close, as also those of the elytra and pygidium, the humeral stria of the elytra bifid behind. It is found under dead fish.

Australia; near Adelaide. Also from Victoria (Frankston, Mr. Kershaw).

S. vernulus, sp. nov. Nitidus; nigricans, obscure viridescens, antennis pedibusque piceis; fronte carinata, sulcis 2 angulatis; prothorace transverso, antice parum angustato, supra antice et latera versus in area lata (hac marginem fere attingenti)—postice anguste—fortiter sat crebre punctulato, stria marginali integra; elytris ab apice ultra medium (lateribus exceptis) subfortiter sat crebre punctulatis, striis validis 1—4 dorsalibus paullo ultra medium abbreviatis inter se sat æqualibus, 4^a ad basin arcuatim cum suturali integra coeunti, subhumerali externa profunda brevi basali interna vix disjuncta (inter humeralem et marginem sulco brevi profundo), humerali modica; pygidio æqualiter crebre punctulato; prosterno striis approximatis parallelis fere integris impresso; mesosterno marginato, lævi; tibiis anticis extus 6-dentatis. Long., 2 l. (vix); lat., $1\frac{3}{10}$ l.

Its distinctly green colour in combination with elytra having a very strong external subhumeral stria renders this species very distinct from the other Australian *Hypocacci* before me. The

short deep sulcus close to the hind end of the humeral elytral stria (between it and the lateral margin) is an unusual character. The puncturation of the elytra and pronotum is a little stronger and less close than in the species referred to above as *S. sinæ*, Mars., but that of the pygidium does not differ much from that species. The front of the prosternum is spatuliform as in the preceding species and other *Hypocacci*, but the sides being more strongly declivous this spatuliform shape is less conspicuous.

N.S. Wales; near Sydney. (Mr. Masters; his No. 99.)

TERETRIUS.

T. Doddi, sp. nov. Cylindricus, sat latus; sat nitidus; piceus, latera versus nonnihil rufescens, antennarum clava testacea, tibiis tarsisque plus minusve rufescentibus; capite subtilius sat crebre punctulato; prothorace transverso, supra inequaliter (ab apice retrorsum gradatim minus subtiliter) punctulato, stria integra impresso, lateribus antice sinuatis; elytris sat crebre subfortiter (in parte postico-externo minus perspicue) punctulatis, haud striatis; prosterno subplano, crebre subfortiter punctulato, postice triangulariter emarginato, striis bene definitis vix ultra medium continuis; mesosterno marginato (basi excepta), sat fortiter minus crebre punctulato, antice triangulariter producto; metasterno utrinque stria recta (hac vix ultra medium continua) impresso, sparsim subtilius (ad latera sat fortiter) punctulato; pygidio subtiliter sat crebre punctulato; tibiis anticis 5 denticulis (e his basali valde minuto), intermediis 6 (e his basali valde minuto, 2°—4° inter se propinquis, 5° 6° que prope apicem positis), posticis 5 (e his basalibus 3 valde minutis) armatis. Long., 1 l.; lat., $\frac{1}{2}$ l. (vix).

The only previously described Australian *Teretrius* with 5-denticulate front tibiæ is *T. australis*, Lewis, of which I have an example sent to me by Mr. Lea (it was sent as *T. basalis*, Lewis, but is clearly not that species, as *inter alia* it has 5-denticulate front tibiæ and the mesosternum obtuse in front). The present species differs from it *inter alia* by its mesosternum quite sharply triangular in front and its elytra very considerably more strongly punctulate.

Queensland (Mr. Dodd).

TERETRIOSOMA.

Of this genus two Australian species (*melburnius*, Mars., and *Somerseti*, Mars.) have been described. They were attributed to *Teretrius* by their author. They are readily distinguishable according to their author (though closely allied) by *inter alia* the front tibiæ of the former having 7 denticles and those of the latter only 5. The former is a common species in Southern

Australia,—the latter (from the far North of tropical Australia) I have not seen. I am somewhat puzzled by a remark Mr. Lewis makes—Ann. Nat. Hist. (6), IX., p. 353—to the effect that *Teretrius Walkeri*, Lewis, was found in Tasmania in company with *Teretriosoma Somerseti*, Mars., and am somewhat inclined to wonder whether he accidentally wrote "*Somerseti*" when he intended "*melburnius*." I have examples of a *Teretriosoma* taken by Mr. Walker in Tasmania and ticketed "*Somerseti*," which are certainly not that species (at least they do not agree with de Marseul's description) for they have seven teeth on their front tibiae, and I have myself met with the same insect in Tasmania. They are very close to *T. melburnius*, Mars., but a certainly distinct species; I describe it below.

I may here remark that I cannot find in the Australian *Teretriosomata* the sexual antennal characters which Lewis alludes to as present in American members of the genus; the sexes, however, are easily distinguished by the sculpture of their pygidium. In one sex (which I take to be the female) the surface of that segment is uneven (variously according to the species), in the other it is without inequalities.

I should add that I have no ground for attributing these species to *Teretriosoma* except Lewis' use of the name for *T. Somerseti* and de Marseul's statement that it and *T. melburnius* are very closely allied; but they are certainly very distinct from *Teretrius*. I have not seen Horn's diagnosis of *Teretriosoma*.

T. gradile, sp. nov. Subcylindricum, modice latum; glabrum; nigro-piceum, latera versus vix rufescens, corpore subtus dilutiori, antennis (harum clava testacea) pedibusque obscure rufis; capite pronotoque subtilius sat crebre (fere ut *T. Melburnii*, Mars.) punctulatis; elytris haud striatis, apicem et latera versus sat dense minus subtiliter (versus scutellum gradatim minus dense magis subtiliter, prope scutellum subtilissime sparsissime) punctulatis; pygidio sat crebre sat fortiter (apicem versus nonnihil rugulose) punctulato; prosterno sat fortiter vix crebre punctulato, haud striato; tibiis anticis denticulis 7, posterioribus 6, armatis. Long., $1\frac{1}{2}$ l.; lat., $\frac{1}{10}$ l.

This species is very close to *T. Melburnius*, Mars.,—in fact I do not observe any well-defined difference except in the puncturation of the elytra, which however is extremely well marked. My unique example is of the sex which has the pygidium even; I have little doubt that the inæqualities on that segment in the other sex are different from the corresponding inæqualities in *melburnius*. The gradual fading away of the puncturation on the elytra from the apex and sides towards the scutellum is very

peculiar; the space round the scutellum is almost punctureless and strongly nitid. The scutellum itself is scarcely visible. The upper three spinules on the hind tibiæ are very small.

Victoria.

T. sorellense, sp. nov. Subcylindricum, minus latum; sat nitidum; piceo-nigrum, corpore subtus dilutiori, pronoti angulis anticis antennis pedibusque rufis; supra sat crebre sat æqualiter punctulatum; prothorace ad latera leviter sat æqualiter arcuato supra stria integra impresso; scutello haud perspicuo, elytris haud striatis; prosterno convexo sat fortiter sat dense punctulato, postice triangulariter emarginato, haud striato; mesosterno marginato, antice producto-triangulo, fortiter nec dense punctulato; metasterno stria arcuata (hac semicirculum coxam intermediam cingentem formanti) impresso, in parte mediana sparsim subtilius (ad latera magis fortiter) punctulato; tibiis anticis 8- (e his denticulis apicalibus 2 fere conjunctis), intermediis 6 (e his basali valde minuto), posticis 6- (e his basilibus 3 valde minutis) denticulatis.

Maris (?) pygidio æquali, apicem versus minus late ruguloso; feminae (?) pygidio apicem versus late ruguloso et hic late vix profunde concavo. Long., $1\frac{1}{10}$ l.; lat., $\frac{1}{2}$ l.

Another close ally of *T. melburnius*, Muls. It is distinctly of narrower and slighter form than that insect, but I cannot specify any other well defined difference apart from the sexual characters in the pygidium of one sex. In *melburnius* the inequality on that segment is caused by the apical one third of the surface being on a different plane from that of the basal portion, —a slightly lower plane,—and the transition from the one plane to the other being sudden there is a perfectly distinct (though not sharply marked except in the middle) transverse line of demarcation, which is more or less angular (the angle pointing hindward) in the middle; the portion on the lower plane is strongly rugulose. In *sorellense* the same sex has practically no line of demarcation between the smooth and rugulose puncturation of the pygidium but the rugulose punctured surface is widely and very distinctly (though scarcely deeply) concave down its middle, the concavity being non-existent in *melburnius*.

Tasmania; Lake Sorell, &c.

PHALACRIDÆ.

LITOCRUS.

L. maritimus, sp. nov. Ovalis; nitidus; niger vel nigro-piceus, corpore subtus capite antice antennis palpis pedibusque rufotestaceis; capite pronotoque sublævibus; hujus stria laterali ad apicem continua hinc intus breviter directa; antennarum

articulo 8° parvo transverso; elytris fere lævibus, stria subsuturali (prope basin excepta) bene determinata, stria 2^a quoque bene determinata, a subsuturali antice late divisa postice contigua (cum hac paullo ante apicem profundiori); tarsorum posticorum articulo basali 2° 3° que conjunctis vix breviori. Long., 1 l.; lat., $\frac{1}{2}$ l.

A very distinct species, differing from all its described congeners, except *frigidus*, Blackb, by the presence of a second stria on the elytra similar to the subsutural stria. In the other species having more striæ than the subsutural one the striæ are numerous. The present species differs from *frigidus* in its coloring and in the absence of elytral puncturation. In the tabulation of *Litocrus* (Tr. R.S., S.A., 1902, p. 294) *L. maritimus* must be placed beside *frigidus*.

Victoria; on flowers at the mouth of the Glenelg River.

NITIDULIDÆ.

HAPTONCURA.

There are a great number of species of small *Nitidulidæ* allied to *Epuræa* occurring in Australia, many of which are now before me. I have tried to distribute them among the genera which Reitter distinguished from *Epuræa* but without success, as few of them fit any of his diagnoses quite satisfactorily and some of those which are the closest *inter se* incline more or less markedly to fall into different ones of his genera. I have therefore placed them all provisionally in *Haptoncura*,—which cannot be far wrong for any of them and seems to be certainly right for some.

Of the species which I have previously attributed to *Haptoncura* I think *victoriensis* should be transferred to *Epuræa*, and I should suppose (from the description) *E. Simsoni*, Grouvelle to be extremely close to it; I presume, however, that it is distinct as I sent *victoriensis* to M. Grouvelle previously to the time when he described *E. Simsoni*.

No other of the species I have previously described, and none of those described below, can be, I think, referred to *Epuræa*. Some of them probably resemble in many respects *E. tasmanica*, Grouv., but I judge from the description of that insect that the lateral margins of its prothorax are not reflexed, which is not the case with any of the species I am now describing.

Three species of *Haptoncura* have been described from Australia by Reitter,—none of which have I seen to my knowledge. *H. imperialis*, Reitter should be unmistakable on account of the bright sharply defined markings of its upper surface, and the other two (from the extreme North of Queensland,—a locality from which I have not seen any *Haptoncura* except *ocularis*,

Fairm.) are both said to be "*confertim punctulate*" which is not the case with any of the species described below.

I have been careful to refer the following descriptions to such of the characters of the species dealt with as seem to be of possibly generic value. The sculpture of the upper surface seems to fall into several rather distinct types and may be of importance,—the surface of some being very conspicuously coriaceous and in others with scarcely any indication of that peculiarity, and again in some of the species before me (*H. nelsonensis*, Blackb., *lindensis*, Blackb., *eyrensis*, Blackb., and *uniformis*, Blackb.) the puncturation of the elytra is decidedly of squamose appearance,—so that it is little visible when looked at with the head of the specimen towards the observer, but very distinct when the position of the specimen is reversed. In the other species the distinctness of the elytral punctures is not affected by the position from which it is looked at.

H. brightensis, sp. nov. Minus lata; obscure brunneo-testacea; subpubescens; capite coriaceo distincte sat crebre punctulato; prothorace quam longiori ut 3 ad 2 latiori, antice sat fortiter (ad basin ipsam parum manifeste) angustato, supra coriaceo ut caput punctulato, lateribus anguste reflexo-marginatis leviter arcuatis, angulis omnibus obtusis; scutello fere ut pronotum punctulato; elytris quam prothorax paullo latioribus et circiter duplo longioribus, coriaceis, subtilius sat sparsim punctulatis, lateribus parum arcuatis, ad apicem truncatis; metasterno postice in medio late angulatim emarginato. Long., 1 l.; lat., $\frac{1}{2}$ l.

The upper surface is indistinctly marked with some scarcely symmetrical infuscation, which is on the disc of the pronotum and (in the form of two discal blotches placed longitudinally) on each elytron; the infuscation is unnoticeable from some points of view. The labrum does not cover the mandibles,—which is inconsistent with the characters Reitter attributes to *Haptoncura*.

Victoria; mountains near Bright.

H. Sloanei, sp. nov. Lata; obscure brunneo-testacea, antennarum clava sat infuscata; subpubescens; capite subplanato coriaceo subtiliter sat sparsim punctulato; prothorace quam longiori duplo latiori, antice sat fortiter postice vix manifeste angustato, supra coriaceo et distincte sat crebre punctulato, lateribus anguste reflexo-marginatis leviter arcuatis, angulis omnibus obtusis; scutello punctulato; elytris quam prothorax vix latioribus minus quam duplo longioribus, coriaceis, minus subtiliter minus sparsim (circa scutellum fere crebre) postice subobsolete punctulatis, lateribus parum arcuatis, ad apicem truncatis; metasterno postice in medio late angulatim emarginato. Long., $\frac{9}{10}$ l.; lat., $\frac{1}{2}$ l.

Of very manifestly shorter and wider build than the preceding (*H. brightensis*) and also differing from it *inter alia* by its prothorax considerably more transverse, its head more finely and sparsely punctulate and its elytra more strongly and closely punctulate, especially in the scutellar region where the punctures are almost *crowded*. In this species the labrum covers the mandibles but I cannot attribute great importance to the character as it seems to me to depend to some extent at least on the attitude of the mandibles at the time when the specimen died. Certainly I could not separate these two generically. The upper surface of this species has some vague infuscation not unlike that of the preceding.

N.S. Wales; from Mr. T. G. Sloane.

H. nelsonensis, sp. nov. Modice lata; brunneo-testacea, abdominis segmentis intermediis infuscatis; sat pubescens; capite subtiliter vix crebre punctulato; prothorace quam longiori ut 12 ad 7 latiori, antice sat fortiter postice vix manifeste angustato, supra coriaceo et crebre (nec ullo modo confluent) minus subtiliter punctulato, lateribus anguste reflexo-marginatis leviter arcuatis, angulis omnibus obtusis; scutello fere ut pronotum (sed paullo subtilius) sculpturato; elytris quam prothorax parum latioribus vix duplo longioribus, coriaceis, sat crebre leviter subsquamose punctulatis, lateribus parum arcuatis, ad apicem truncatis; metasterno postice in medio late angulatim emarginato. Long., 1 l.; lat., $\frac{1}{2}$ l.

The elytral puncturation of this species differs from that of the preceding two species in being much less sharply defined (as in *lindensis*, Blackb., *Meyricki*, Blackb., *Victoriensis*, Blackb., and *ocularis*, Fairm.). It differs from that of the last named two in the derm on which this puncturation is placed being very distinctly coriaceous, and from that of *lindensis* in its being much closer. It is more like that of *Meyricki*, but that species differs from the present one in respect of other characters,—e.g. in the puncturation of its pronotum being confluent. Such infuscation of the elytra as is present consists of a vague triangular common blotch in the scutellar region and an ante-apical cloud.

Victoria; on flowers near Nelson.

H. sparsior, sp. nov. Modice lata; obscure brunneo-testacea, antennarum clava et meso-meta-que sternis nigricantibus; subpubescens; capite coriaceo subtiliter sat sparsim punctulato; prothorace quam longiori fere duplo latiori, antice sat fortiter postice vix manifeste angustato, supra coriaceo et sparsim minus subtiliter punctulato, lateribus anguste reflexo-marginatis leviter arcuatis, angulis omnibus obtusis; scutello coriaceo sparsissime punctulato; elytris quam pro

thorax vix latioribus vix duplo longioribus, coriaceis, sat sparsim (prope scutellum paullo minus sparsim) minus subtilius punctulatis, lateribus parum arcuatis, ad apicem truncatis; metasterno postice in medio late angulatim emarginato. Long., 1 l.; lat., $\frac{1}{2}$ l. (vix).

In my unique example of this species the mandibles are entirely covered by the labrum. Rather close to *H. Sloanei*, Blackb., but differing from it *inter alia* by the black club of its antennæ, the nearly black color of its meso- and meta-sterna (in strong contrast to the testaceous prosternum and abdomen), its evidently less transverse prothorax, and its much less closely punctured pronotum (the punctures of which even close to the front margin are separated *inter se* by more than the length of the diameter of individual punctures. There is a little vague infuscation on the elytra in the scutellar region and behind the middle, also forming a wide margin on the scutellum itself.

N.S. Wales.

H. darwinensis, sp. nov. Minus lata; obscure brunneo-testacea, meso- et meta-sternis nigricantibus; subpubescens; capite coriaceo subtiliter sat sparsim punctulato; prothorace quam longiori fere duplo latiori, antice sat fortiter postice vix manifeste angustato, supra coriaceo et sparsim (in medio disco sparsissime) subtiliter punctulato, lateribus angustissime reflexo-marginatis leviter arcuatis, angulis omnibus obtusis; scutello coriaceo sparsim punctulato, elytris quam prothorax vix latioribus circiter duplo longioribus, coriaccis, sat sparsim (prope scutellum paullo minus sparsim) sat subtiliter punctulatis, lateribus parum arcuatis, ad apicem truncatis; metasterno postice in medio late angulatim emarginato. Long., $\frac{1}{3}$ l.; lat., $\frac{2}{3}$ l. (vix).

This species is certainly very close to the preceding (*H. sparsior*) but I cannot regard them as identical. *H. darwinensis* is very evidently smaller than *sparsior*, of less wide build, its antennal club testaceous, its prothorax a trifle more transverse and with a narrower reflexed margin, its pronotum evidently more finely and sparsely (on the middle of the disc *extremely* finely and sparsely) punctured. It differs from *Sloanei*, Blackb., by the same characters that distinguish *sparsior* (except the colour of the antennal club). The infuscation of the upper surface is much as in *sparsior*.

Tropical Australia (Port Darwin).

H. eyrensis, sp. nov. Modice lata; brunneo-testacea; subpubescens; sub-nitida; vix coriacea; capite crebre punctulato; prothorace quam longiori fere duplo latiori, antice sat fortiter postice haud angustato, supra sat crebre (presertim antice)

subtiliter punctulato, lateribus angustissime reflexo-marginatis leviter arcuatis, angulis omnibus obtusis; scutello crebrius punctulato; elytris quam prothorax vix latioribus vix duplc longioribus, ad apicem truncatis, sat crebre subtilius squamoso-punctulatis, lateribus parum arcuatis; metasterno postice fere truncato, vix (nullo modo angulatum) emarginato. Long., 1 l. (vix.); lat., $\frac{2}{3}$ l.

This species differs from all the preceding in its metasternum not being angularly emarginate behind. In this character it agrees with *H. uniformis*, Blackb. from which it differs *inter alia* in its much lighter colour and much more closely punctulate head.

S. Australia (Eyre's Peninsula).

TABULATION OF THE AUSTRALIAN SPECIES OF HAPTONCURA
KNOWN TO THE WRITER.

- A. Elytra with sharply defined black and yellow markings ... *ocularis*, Fairm.
 AA. Elytra not having sharply defined markings.
 B. Pronotum confluently punctulate ... *Meyricki*, Blackb.
 BB. Puncturation of pronotum not confluent.
 C. Hind margin of metasternum angularly emarginate in the middle.
 D. Pronotum closely punctulate.
 E. Puncturation of elytra not squamose.
 F. Elytra sparsely punctulate ... *brightensis*, Blackb.
 FF. Elytra much more closely punctulate ... *Sloanei*, Blackb.
 EE. Puncturation of elytra squamose.
 F. Sides of pronotum distinctly reflexed ... *nelsonensis*, Blackb.
 FF. Sides of pronotum not reflexed ... *lindensis*, Blackb.
 DD. Pronotum sparsely punctulate.
 E. Antennal club black ... *sparsior*, Blackb.
 EE. Antennal club testaceous ... *darwinensis*, Blackb.
 CC. Hind margin of metasternum very wide and nearly straight.
 D. Head sparsely punctulate ... *uniformis*, Blackb.
 DD. Head closely punctulate ... *eyrensis*, Blackb.

CRYPTARCHA.

- C. elegantior*, sp. nov. Ovata; minus depressa; sat nitida; pubescens; nigro-picea, capite antice prothorace (marginibus antico et postico exceptis) elytrorum marginibus lateralibus et macula permagna communi triangulari basali antennis pedibus et pygidii lateribus rufis; capite pronotoque sat grosse sat crebre punctulatis; epistomo leviter biimpresso; prothorace fortiter transverso, antice angustato, lateribus arcuatis reflexo-marginatis, angulis posticis (superne visis) retrorsum inclinatis sat acutis, disco medio manifeste planato; elytris ad apicem truncatis, sat fortiter punctulato-striatis,

striis latera versus obsoletis (subsuturali profunda ad basin continua), interstitiis sat angustis sat planis (sed 2° manifeste, 3° vix, antice convexis). Long., $1\frac{3}{4}$ l.; lat., $\frac{4}{5}$ l.

There are about eleven punctulate striæ on each elytron, outside of which the sculpture becomes vague and the puncturation scarcely seriate,—the external of the eleven striæ becoming successively feeble. The evident convexity of the second interstice a little behind the base is suggestive of *C. depressa*, Grouv., from which the present species differs *inter alia multa* by the very much coarser puncturation of its head and pronotum, the absence of a defined keel on the pronotum, the much stronger elytral striæ, the continuity to the base of the subsutural stria, and the very slight convexity of the second elytral interstice. The elytral interstices in general though nearly flat are less decidedly so than in *depressa*. The red common triangle on the elytra has its base on the base of the elytra and its apex about the middle of the suture.

Victoria (Dividing Range and Alps).

C. subnigella, sp. nov. Ovata, postice sat fortiter angustata; minus depressa; sat nitida; pubescens; supra nigra, nonnullorum exemplorum prothoracis lateribus et elytrorum apice summo subrufescentibus, corpore subtus piceo, antennis mandibulis pedibusque rufis; capite pronotoque sat grosse sat crebre punctulatis; epistomo leviter biimpresso; prothorace fortiter transverso, antice angustato, lateribus arcuatis vix reflexo-marginatis, angulis posticis (superne visis) retrorsum inclinatis sat acutis, disco longitudinaliter carinato; elytris ad apicem truncatis, sat fortiter punctulato-striatis, striis latera versus bene definitis sed in parte humerali obsoletis (subsuturali profunda ad basin continua), interstitiis angustis subcariniformibus. Long., $1\frac{1}{2}$ l.; lat., $\frac{7}{10}$ l.

Agrees with the preceding in the presence on its elytra of a strong entire subsutural stria. There are about 14 striæ on the elytra of this species in front (with a wide non-striate but strongly punctulate interval between the eleventh and twelfth striæ),—those near the suture and lateral margins being the most strongly impressed; only about 12 striæ cross the *middle* of the elytra, the second, third and fourth becoming obsolete about the middle, and the (in front broad) interval between the eleventh and twelfth striæ narrowing behind into an additional stria. Of the interstices the first in its front part is the most strongly cariniform, the second, third, and fourth are decidedly though very finely cariniform, the fifth and eleventh indistinctly (except from certain points of view) and extremely finely cariniform, the

lateral two or three strongly so. Resembles the preceding (*C. elegantior*) in the coarse puncturation of its head and prothorax but differs from it *inter alia* very widely in coloring, also in the presence of a comparatively strong longitudinal carina on the pronotum, and the details of the elytral sculpture. A small brown *Cryptarcha* less narrowed behind (from the same region) appears to me to be a starved immature example of this insect, but may represent a distinct species.

Victoria (Northern Mountains).

COLYDIIDÆ.

PHORMESA.

P. Carpentariae, sp. nov. Sat depressa; sat opaca; piceo-nigra, capite antice pronoti lateribus elytris (basi fascia lata mediana apice et maculis nonnullis parvis piceis exceptis) antennis pedibusque rufo-testaceis; prothorace transverso, ab apice retrorsum leviter angustato, supra confertim subtiliter aspero, utrinque bicostato, costis exterioribus integris (interioribus prope marginem anticum introrsum subito versis et hic inter se fere conjunctis, postice introrsum sic ut laquea singula formant versis), lateribus fere rectis sat anguste reflexo-marginatis subtilius crenulatis, angulis anticis fortiter productis sat acutis posticis obtusis; elytris singulis 5-carinatis, interstitiis grosse biseriatis punctulatis. Long., $1\frac{3}{8}$ l.; lat. $\frac{1}{2}$ l.

Remarkably suggestive of the European *Ditoma crenata*, Hbst., in color and markings. I think it should be placed in *Phormesa*, but it seems to incline towards *Ditoma*, its antennary furrows being very feeble, and the reflexed margin of its pronotum distinctly narrow.

Queensland (Mr. Koebele, Cairns).

TODIMA.

T. lateralis, sp. nov. Elongata, postice sat angustata; parum convexa; minus nitida; parce pubescens; rufula, capite et pronoti elytrorumque disco infuscatis; capite subquadrato, antice bifoveolato, confertim subtiliter ruguloso-punctulato; prothorace transverso, supra ut caput sculpturato, ad latera latius (quam *T. fusce*, Grouv. et *rufulæ*, Grouv. perspicue magis late) explanato, disco depresso, utrinque substriato, striis antice et postice incurvatis, lateribus fere rectis, angulis anticis subacutis posticis fere rectis; elytris quam prothorax parum latioribus, punctulato-striatis, interstitiis sat planis (7° subcariniformi, elytris extra hoc sat abrupte declivibus). Long., $1\frac{1}{2}$ l.; lat., $\frac{1}{2}$ l.

My two specimens of this insect differ considerably from each other in color,—one being considerably darker than the other on both the upper and under surface. The species is rather close to *T. rufula*, Grouv., its most conspicuous difference being in the form of the prothorax,—the sides of which are almost straight, with the lateral edging very distinctly wider and evidently explanate.

Victoria (in *Xanthorrhœa*, near the mouth of the Glenelg River).

PSEUDEBA (gen. nov. *Colydiidarum*.)

Caput transversum antice profunde emarginatum ad clypeum recipiendum; antennæ breves, crassæ, basi tectæ, 11 articulatæ (articulo basali minuto ceteris gradatim magis transversis, apicali brevi minus lato); palporum maxillarium articulo ultimo elongato-conico, oculi grosse granulati, superne vix manifesti; prothorax transversus, basi angustatus; elytra elongata, quam prothorax circiter duplo longiora; tibiæ modice latæ, ad apicem calcaratæ; prosternum antice profunde emarginatum, ante coxas breve; coxæ anticæ inter se sat anguste divisæ, intermediæ fere contiguæ, posticæ vix late divisæ; segmentum ventrale basale quam 2^{um} haud (quam 3^{um} manifeste) longius, antice inter coxas sat angustum; tarsi 4-articulati, breves, sat crassi, articulis 1—3 inter se sat æqualibus (4^o quam ceteri conjuncti vix breviori); corpus glabrum, sat opacum, alatum, sat convexum.

The obscure little insect for which I propose this name is evidently allied to the species mentioned in Trans. R.S., S.A., 1902, p. 318 as being probably *Eba cerylonoides*, Pasc. The curious antennæ of the two are extremely similar, but whereas in the present species there is certainly a minute basal joint (making the number of joints 11) I cannot detect any such joint in the other. The character that seems to me most distinctive of this genus is the very strong emargination of the front of the prosternum which causes the front margin of the prosternum to be considerably nearer to the coxæ than is usual in the *Colydiidæ*. I am afraid I must say of it,—as Pascoe said of *Eba*,—"for the present its affinities must be left in doubt," but there seems no other family than the *Colydiidæ* in which it could possibly be placed. It should be added that the position of the clypeus in a deep emargination of the front is a distinctive character and the same may be said of the eyes scarcely visible except when viewed from below,—which is however the case with some other *Colydiidæ* (e.g., *Deretaphrus*,—especially *D. Erichsoni*, Newm.). In general appearance this insect is not very like any other known to me,—

perhaps on a casual inspection a place not far from *Deretaphrus* would be thought of,—but many of its characters are quite inconsistent with such a place; and in Lacordaire's classification it would have to stand in the *Synchitides*.

P. novica, sp. nov. Sat elongata, pos tice angustata; ferruginea; capite prothoraceque supra crebre minus fortiter punctulatis; hoc transverso, æquali, lateribus antice leviter arcuatis, circiter medium subangulatis (hinc ad basin subsinuatum convergentibus), angulis anticis vix productis posticis acute rectis, margine antico supra fere recta quam basis manifeste latiori, hac fere recta; scutello sat magno, transverso; elytris vix manifeste punctulatis, costulis circiter 8 (his nonnihil arcuatis) subtilibus ornatis. Long., $1\frac{2}{3}$ l.; lat., $\frac{1}{2}$ l.

It will be noticed that the outline of the prothorax resembles that of *Deretaphrus*, but the segment is quite strongly transverse. The fine elevated lines on the elytra are slightly arched (the extremities of each inclined outward).

Queensland; Townsville (from Mr. F. P. Dodd).

DERETAPHRUS.

This genus seems to be very numerous in species although a comparatively small number have been described. Its species are closely allied and more or less variable,—especially in respect of size. Before describing new species it seems desirable to make some remarks on those already named. In Masters' Catalogue 11 species are enumerated, and Mr. Lea has since described four species. *D. puteus*, Newm., has been shown to be a *Bothrideres* (Journ. Ent. I., p. 460) and *D. granulipennis*, Reitt. is (see below) identical with *Erichsoni*, Newm. *D. Wollastoni*, Newm., is probably not a *Deretaphrus*; at any rate it is very different from any species before me, its pronotum being described as having a median depression on the basal half and on either side a carina extending from the hind angle of the pronotum straight forward (not following the lateral margin) towards the front of the segment. This reduces the number of valid *Deretaphri* to 12. On seven of these I remark as follows. *D. Pascoei*, Macl. is not recognisable by the description which would fit several species (e.g. *fossus*, Newm. and *ignarus*, Pasc.); as it is from Queensland (from which place I have not seen any *Deretaphri*) it is,—if a valid species,—not likely to be before me. *D. analis*, Lea, is described as having its upper surface "almost impunctate;" it also is from a locality (Northern N. S. Wales) very remote from those of the *Deretaphri* I have examined, and none of them approaches Mr. Lea's insect in respect of the character I have mentioned. *D. xanthorrhææ*, Lea, and *parviceps*, Lea (both from W. Australia) are not described as in the least

like the one species from W. Australia that I have seen. *D. ignarus*, Pasc. (from Sydney) is said to have elytral interstices much less distinctly punctured than those of *D. fossus*, Newm.; I have not seen any *Deretaphrus* (that comes near fitting the description of *ignarus*) in which that character is apparent, nor any at all from the Sydney region; Mr. Lea has sent me a *Deretaphrus* from Forest Reefs under the name *ignarus*, but as its elytral interstices are quite as strongly punctulate as in *fossus* I cannot think it rightly named. *D. colydioides*, Pasc. may possibly be a Victorian species before me, but it is too vaguely described for confident identification.

The most reliable and tangible characters for distinguishing the species of *Deretaphrus* seem to me to be those of the pronotum, and I divide the genus into three main groups founded on the puncturation of that organ. In the first of these the punctures are extremely fine and sparse (as in *D. piceus*, Germ). In the second the punctures are still very sparse and decidedly fine, but not nearly so fine as in *piceus*. In the third group they are comparatively coarse and close (not much different from those of *D. fossus*, Newm.). Another valuable character is found in the structure of the carina and stria which form the division between the pronotum and prosternum. These do not, in any *Deretaphrus* known to me, reach the front margin of the segment, but cease at an interval from that margin which differs in different species; in some species moreover, they end by becoming gradually feebler and when that is the case the front angles of the segment (viewed from above) seem very obtuse or even non-existent, while in other species they end abruptly and in that case their terminus (viewed from above) has the appearance of being a well-defined front angle of the segment from which the apparent apical margin projects forward (with a convex front outline) towards the head. It is to be noted, however, that the terminus of the lateral carina is in no species *really* at the true front corner of the pronotum. In most of the existing descriptions of *Deretaphri* a good deal of emphasis has been laid upon the carination of the elytral interstices. So far as my observation goes it is not a satisfactory character for exact definition. In all species known to me of the genus the alternate interstices become carinate (or more strongly carinate) near the apex and undoubtedly the tendency of this carination to begin nearer to (or even *at*) the base seems characteristic of species. Nevertheless, specimens of the same species (at any rate, specimens taken in company and *apparently* of one species) seem to differ a little *inter se* in this respect. Moreover, in general the degree of convexity of the interstices looks different from different points of view. Among the considerable number of *Deretaphri* in my

collection, only one species has the third interstice of the elytra genuinely carinate (i.e. its summit a sharp keel-like edge) throughout its length, though there are a good many species in which it is "raised" or "convex" throughout.

Unfortunately there is a doubt (it seems to me) as to which of the *Deretaphri* is *fossus*, Newm.,—the type of the genus. If Newman's expression "elytron utrumque 4-carinatum" is taken strictly (i.e. as meaning that the alternate interstices are entirely carinate as distinguished from merely convex) there is only one species before me that could possibly be *fossus*,—and it is evidently the species that Pascoe calls *fossus*. It however is of a pitchy-black color, whereas according to Newman the color is "fuscus." This would seem to be a small difficulty were it not that Pascoe has described a species (*ignarus*) the description of which equally agrees with Newman's description independently of color and also agrees in color (calling it "obscure rufo-fuscus"). Pascoe distinguishes the species thus "*fossus* is pitchy black, with the elytral interstices punctured; *ignarus* is dark rufo-fuscous with the elytral interstices all but unpunctured." As the interstices of the elytra (in the sense in which Pascoe uses the term) are not even mentioned in Newman's very brief description there certainly seems to be a doubt whether *ignarus*, Pasc., may not be the true *fossus*. Nevertheless the *probability* seems in favour of Newman having had before him a somewhat unusually colored specimen of the species that Pascoe calls *fossus*, inasmuch as it is much the commoner species (at any rate in the localities from which Newman obtained most of his Australian *Coleoptera*). This insect is common in Victoria and may be recognised by the following characters from all its congeners described, or known to me; color pitchy black (opaque), the legs and undersurface a little reddish; pronotum closely and strongly punctulate, with a dorsal channel reaching from close to the base to about the middle of the segment, beyond which is a vague but fairly deep depression; the elytra with shoulders strongly produced, their alternate interstices and also the sixth continuously carinate (i.e. their summit shining and knife-edge-like), all the interstices quite distinctly (though very finely and sparsely) punctulate; the (apparent) front angles of the prothorax very little marked, though more distinct than in some species (e.g. *D. piceus*, Germ.)

D. thoracicus, sp. nov. Sat angustus; sat elongatus; modice nitidus; piceus, antennis pedibusque plus minusve rufescentibus; capite fortiter convexo, subtilius sat crebre punctulato; prothorace quam latiori ut 7 ad 5 longiori, sparsim subtilissime punctulato, profunde canaliculato (canali basin fere apicem nullo modo attingenti, ante medium interrupto), ad quasi-apicem quam ad mediam partem vix angustiori,

lateribus a quasi-apice ad medium subrectis fere parallelis hinc ad basin fortiter sinuatis, angulis anticis (superne visis) late obtusis sed sat bene determinatis posticis valde obtusis (ad apicem summum vix subdentiformibus), carinæ lateralis apice a segmenti margine antico late (circiter oculi diametro) distanti, parte basali utrinque foveata; elytris punctulato-striatis (striis subsuturalibus 2 subtiliter, ceteris sat grosse, punctulatis), interstitiis alternis convexis (3° ad basin et apicem, 5° 7° que totis, cariniformibus alternis vix convexis (omnibus fere impunctulatis), humeris prominentibus. Long., 5 l.; lat., $1\frac{1}{10}$ l.

This species is extremely close to *D. piceus*, Germ., indeed the only differences that I can specify are in the greater convexity of the head between the eyes and in the form of the prothorax,—but the latter is so strongly marked that I cannot but consider it specific. Viewed from above the apparent front margin of the pronotum (closely examined it is seen to be not the true front margin but the interval between the apices of the lateral carinæ of the segment) joins the lateral margin by a very open but quite distinct angle from which the sides of the segment are straight and parallel to the middle of their length; whereas in *piceus* (viewed from above) the apparent front margin is the real one and the front angles appear quite rounded off, the sides of the segment diverging in a curve from the front to the middle so that at its middle the prothorax is considerably wider than in front. The form of the quasi-front margin of the pronotum in *D. thoracicus* is almost exactly as in *D. fossus*, Newm., but in that species the sides are different (converging in a curve hindward, so that the width of the segment across the middle is notably less than across the quasi-front angles). I have examined a considerable number of South Australian examples (and a few Victorian) of *D. piceus* and find no variation whatever in the form of the prothorax.

Victoria, Glenelg River district.

D. Bakewelli, Pasc. If my identification of this insect (which I have from N.S. Wales, Victoria, and Tasmania) is correct (about which I have little doubt) it is even closer to *D. piceus* than is *D. thoracicus*; nevertheless, I believe it to be a valid species. All the examples that I have seen are of a dark ferruginous colour (certainly not due to immaturity) and are evidently more nitid than examples of *piceus*; the prothorax, too, is a little narrower behind and (therefore) with its sides a little more strongly rounded. Unless I am uniting two species under this name *D. Bakewelli* varies extremely in size, one example from the Victorian mountains being less than 3 lines long, while the largest (from N.S. Wales) is more than 5 lines. The

smaller examples seem of more slender build than the larger ones with the sides of the prothorax a trifle more strongly rounded. It is quite possible that the collection of numerous specimens of each form taken in company might establish their distinctness.

D. gracilis, sp. nov. Angustus; elongatus; sat nitidus; obscure ferrugineus; capite pronotoque fere ut præcedentis (*D. thoracici*) sed hoc magis fortiter nec magis crebre punctulato, lateribus minus fortiter marginatis et ante medium magis arcuatis, angulis posticis multo minus late obtusis; elytris seriatim fortiter punctulatis (serie subsuturali in stria sat manifesta impressa), interstitiis subtilissime sat perspicue punctulatis omnino (3° prope basin apicemque et 5° 7° que totis leviter subcariniformibus exceptis) planis. Long., $3\frac{1}{2}$ l.; lat., $\frac{1}{10}$ l. (vix).

This is a very isolated species of *Deretaphrus*,—the most decidedly nitid known to me and differing from all others that I have seen in the inner four of the interstices of its elytra (except the third close to the base and near the apex) being absolutely flat, the second, third, and fourth rows of punctures being mere isolated impressions on an even surface. The pronotum is so much like that of the preceding species that it seems unnecessary to repeat the details of its description, and sufficient to say that the description of the pronotum of *thoracicus* describes that of the present species with the qualifications noted above. The two previously known W. Australian species of *Deretaphrus* (neither of which I have, to my knowledge, seen) are described as having the third interstice keel-like.

W. Australia.

D. iridescens, sp. nov. Sat elongatus; sat angustus; sat nitidus (præcipue in pronoto); obscure ferrugineus, pronoto manifeste cæruleo-micanti; capite subtilius sat crebre punctulato; prothorace quam latiori ut 6 ad 5 longiori, supra sparsim vix subtiliter punctulato, subdepresso, profunde canaliculato (canali basin fere apicem nullo modo attingenti, ante medium interrupto, parte antica perparva), ad quasi-apicem quam ad mediam partem parum angustiori, lateribus a quasi-apice fere ad basin sat æqualiter arcuatis hinc ad basin sinuatis, angulis quasi-anticis (superne visis) late obtusis posticis sat obtusis sed ad apicem summum dentiformibus, carinæ lateralis apice a segmenti margine antico late (circiter oculi diametro) distanti, parte basali utrinque transversim impressa: elytris punctulato-striatis (striis suturalibus 2 subtiliter, ceteris sat grosse, punctulatis), interstitiis alternis leviter convexis (3° ad basin et apicem, 5° 7° que totis, subcariniformibus) alternis sat planis (omnibus vix perspicue

punctulatis), humeris parum prominentibus. Long., $3\frac{2}{3}$ l.; lat., $\frac{4}{5}$ l.

This species forms with the preceding a small group that differs from the *piceus* group by its evidently more,—and from the *fossus* group by its evidently less,—strongly punctulate pronotum. It differs from all the other *Deretaphri* known to me by the front part of the lateral outline of its prothorax forming a regular curve which passes into the posterior sinuation evident¹ further back (i.e. nearer the base) than in the other species.

S. Australia (Adelaide district).

D. cordicollis, sp. nov. Elongatus; sat angustus; minus nitidus; piceus, femoribus magis rufescentibus; capite longitudinaliter leviter impresso, crebrius minus subtiliter punctulato; prothorace quam latiori parum longiori, supra sat crebre sat fortiter (quam *D. fossi*, Newm., vix minus fortiter) punctulato, profunde canaliculato (canali basin fere apicem sat prope attingenti, circiter medium interrupto, parte antica magna minus concinne definita), ad quasi-apicem quam ad mediam partem sat latiori, lateribus a quasi-apice ad medium leviter arcuatis hinc ad basin valde sinuatis, angulis quasi-anticis bene determinatis fere subacutis posticis leviter obtusis sed ad apicem summum sat fortiter dentiformibus, carinae lateralis apice a segmenti margine antico minus late (oculi diametri circiter dimidio) distanti, parte basali utrinque late leviter impressa; elytris punctulato-striatis, interstitiis alternis (3° in parte media magis obtuso excepto) cariniformibus alternis (6° in parte subapicali cariniformi excepto) vix convexis (omnibus perspicue punctulatis), humeris modice prominentibus. Long., $5\frac{2}{3}$ l.; lat., 1 l.

The close and comparatively strong puncturation of its pronotum associates this insect with the *fossus* group of species. From the species which I have indicated above as being in my opinion *fossus* the present one differs *inter alia* (*a*) in respect of its pronotum by the much more sharply defined quasi-front angles (a character which separates it also from all the other hitherto described *Deretaphri* known to me) the much larger and deeper front part of the longitudinal channel (which however is of the same foveiform character as in *fossus*), the evidently (though not very much) finer puncturation, the stronger lateral sinuation, the considerably more strongly dentiform apex of the hind angles, the much nearer approach of the lateral carina to the front margin of the segment; (*b*) in respect of its elytra by the third interstice being in the middle part of its length obtusely convex rather than cariniform, by the sixth interstice being cariniform only in a short space a little behind the middle, by

the shoulders being much less prominent; (*c*) in respect of the head by the presence of a distinct (though not strongly defined) longitudinal impression.

A much smaller specimen (Long., $3\frac{3}{4}$ l.) of a ferruginous red color which I took near the summit of one of the higher Victorian mountains does not seem to differ much from this species, —the hind angles of its prothorax, however, being a little more strongly obtuse and less strongly dentiform at extreme apex and the third interstice of its elytra being non-cariniform for a considerably greater proportion of its length. It is probably a valid species, but more specimens of both forms ought to be examined before this Victorian insect is described as distinct.

Tasmania.

D. popularis, sp. nov. Sat elongatus; modice angustus; minus nitidus; nigro-piceus, antennis pedibus et corpore subtus nonnihil rufescentibus; capite longitudinaliter leviter impresso, crebre subfortiter punctulato; prothorace quam latiori ut 8 ad 7 longiori, supra crebre sat fortiter (ut *D. fossi*, Newm.) punctulato, profunde canaliculato (canali basin fere apicem nullo modo attingenti, paullo ante medium interrupto), ad quasi-apicem quam ad medium vix angustiori lateribus a quasi-apice ad medium parum arcuatis hinc ad basin modice sinuatis, angulis quasi-anticis bene determinatis obtusis posticis sat obtusis ad apicem summum vix dentiformibus, carinæ lateralis apice a segmenti margine antico sat late (quam oculi diametro paullo minus late) distant, parte basali utrinque late subobsolete impressa; elytris punctulato-striatis, interstitiis alternis (3° in parte mediana fere plano excepto) cariniformibus alternis (4° 6° que obsolete convexis exceptis) fere planis (omnibus minute punctulatis) humeris vix prominentibus. Long., 4 l.; lat. 1 l. (vix).

I do not find any very salient single character in this species to separate it from its congeners. It is nearest, I think, to the Adelaide insect which I have no doubt is *viduatus*, Pasc. and which is notable for the almost flat surface of the middle part of the third interstice of its elytra. The present species agrees with *viduatus* in that respect (and most others) but differs widely in the form of its prothorax, the lateral margin of which reaches evidently nearer to the true front margin of the segment, and the quasi-front margin of which resembles that of *Ericksoni*, Newm. but with the quasi-front angles still more pronounced and the distinction between the true and the apparent front margin much less observable from above,—in fact (as is the case also in *D. thoracicus*) scarcely discoverable except when looked at from

the side. In *D. viduatus* the portion of the outline corresponding to the quasi-front angles of *D. popularis* is so rounded off that no quasi-front angles appear, and therefore no other front margin than the true one being observable, the segment presents the appearance of being (as it *really* is in all the *Deretaphri*) very little wider across the front margin than the base.

Australia (I am not sure of the exact habitat but believe it to be the Victorian Mountains.).

D. æqualiceps, sp. nov. Sat elongatus; angustus; sat nitidus; rufo-ferrugineus; capite convexo, æquali (nullo modo impresso), sat crebre minus fortiter punctulato; prothorace quam latiori ut 7 ad 6 longiori, supra crebre minus profunde punctulato, aliter fere ut præcedentis (*D. popularis*) sed foveis subbasalibus majoribus profundioribus; elytris fere ut præcedentis sed interstitio 3^o in parte discoidali sat fortiter convexo-elevato (fere subcariniformi). Long., 3½ l.; lat., ⅔ l. (vix.).

In the group of *Deretaphri* having the pronotum closely punctulate and its sulcus interrupted this species is readily distinguished by the perfectly even surface of its head which has no inequalities whatever. It also differs from them *inter alia* as follows,—from *fossus*, Newm. by its very much less prominent shoulders, from *cordicollis*, Blackb. by the non-cariniform sixth interstice of its elytra, from *popularis*, Blackb. by the much more convex third interstice of its elytra, from *colydioides* Pasc. (?) and indeed all the others not already mentioned,—by the very much more strongly defined quasi-front angles of its prothorax.

Victoria (Dividing Range).

D. sparsiceps, sp. nov. Sat elongatus; sat angustus; minus nitidus; piceus; capite sat sparsim punctulato, ad suturam clypealem mediam impresso; prothorace quam latiori ut 8 ad 7 longiori, sat crebre sat fortiter (quam *D. fossi*, Newm., minus crebre fere magis fortiter) punctulato, profunde canaliculato (canali basin fere apicem nullo modo attingenti, circiter medium interrupto, parte antica elongata) ad quasi-apicem quam ad medium haud angustiori, lateribus a quasi-apice ad medium vix arcuatis hinc ad basin fortiter sinuatis, angulis quasi-anticis male definitis (late obtusis) posticis subrectis ad apicem summum minute dentiformibus, carinæ lateralis apice a segmenti margine antico late (circiter oculi diametro) distant, parte basali utrinque depressa; elytris punctulato-striatis, interstitiis alternis quam cetera vix (ad apicem magis fortiter, 5^o toto leviter subcariniformi, exceptis) magis convexis alternis subplanis (omnibus subtiliter punctulatis), humeris vix prominentibus. Long., 4½ l.; lat., ⅞ l.

This species has the quasi-front angles of its prothorax extremely obtuse (as in *fossus*, Newm.), the true lateral margins of the segment converging forward from them much less strongly than in the three preceding species so that there is a much longer piece of the pronotum in front of them; they are, however, quite distinctly angles and not rounded off as they are in the species that I take to be *viduatus*, Pasc. The elytral sculpture is much like that of the latter species from which however it is readily distinguished not only by the better defined quasi-front angles of the prothorax, but also by the very much less close puncturation of the head.

S. Australia (Eyre's Peninsula).

D. cribriceps, sp. nov. Elongatus; angustus; minus nitidus; piceus, antennis pedibusque obscure rufescentibus; capite creberrime strigatim subrugulose punctulato, ad suturam clypealem mediam impresso; prothorace quam latiori ut 6 ad 5 longiori, crebre fortiter (ut *D. fossi*, Newm.) punctulato, ut præcedentis (*D. sparsicipitis*) canaliculato, ad quasi-apicem quam ad medium perspicue angustiori, lateribus a quasi-apice ad medium manifeste arcuatis hinc ad basin sat fortiter sinuatis, angulis quasi-anticis rotundatis posticis leviter obtusis ad apicem summum dentiformibus, carinæ lateralis apice a segmenti margine antico late (circiter oculi diametro) distanti, parte basali utrinque transversim impressa; elytris punctulato-striatis, interstitiis alternis (3° in parte mediana excepto) cariniformibus alternis parum convexis (omnibus minus perspicue punctulatis), humeris vix prominentibus. Long., 4 l.; lat., $\frac{7}{10}$ l.

This species differs from all the preceding (of the group having the pronotum closely punctured) by the lateral outline being rounded at the part where they have the angles that I have called the quasi-front angles of the pronotum. In this respect it agrees with *D. viduatus*, Pasc., from which it differs *inter alia* by the third interstice of its elytra being cariniform at the base as well as the apex, and by the sculpture of its head, closer and quite evidently rugulose and not longitudinally sulcate in the front part: the unique type moreover is much smaller than any specimen of *viduatus* that I have seen. The obsolete puncturation of the elytral interstices is suggestive of *ignarus*, Pasc., but the brief description of that species implies that the third interstice of the elytra is entirely cariniform, and represents the insect as differently colored and much larger. There is little in the description of *D. colydioides*, Pasc., to distinguish that species from the present one as it is an extremely short and vague description, but it indicates *colydioides* as very much smaller, and

remarkable for its cylindrical form ; and I do not find any very noticeable difference in form between this and other species.

Victoria (taken by Miss Waterhouse near Ballarat).

D. viduatus, Pasc. I have several examples taken near Adelaide (the original locality) which agree with Pascoe's brief description and are no doubt the species to which he gave this name. It is near the preceding (*D. cribriceps*) but differs as specified above. Its head is evidently larger than that of *cribriceps* and is non-rugulose and less closely punctulate, with a well marked longitudinal median impression traversing the clypeus and produced hindward more or less behind the clypeal suture. Pascoe's brief description does not refer to the third interstice of the elytra in particular, merely saying that the interstices near the suture are not raised except at the apex and base. In a short note following the description, however, it is stated that the third interstitial line is not prominent. The fact is that of the nearest four interstices to the suture none are distinctly raised anywhere except the third, which is quite strongly cariniform in about its apical one-fifth and is evidently convex close to the base, becoming cariniform on the basal declivity of the elytra.

D. granulipennis, Reitt. This name is evidently a synonym of *D. Erichsoni*, Newm., the description of which was clearly unknown to Reitter, inasmuch as he says that his species differs from all those previously described in having the sulcus of the pronotum continuous,—while Newman had attributed that character to *Erichsoni*. A comparison of the descriptions is quite conclusive as to their having been founded on a single species. I believe this synonymy has not been previously noted.

The following is a tabular statement of the distinctive characters of the *Deretaphri* known to me :—

- A. The sulcus of the pronotum deep and sharply defined.
- B. Pronotum excessively finely—almost invisibly—punctulate.
- C. Sides of prothorax rounded in front half.
 - D. Nigro-piceous, subopaque ; prothorax less narrowed at base *piceus*, Germ.
 - DD. Fuscous-red, nitid ; prothorax more narrowed at base *Bakewelli*, Pasc.
- CC. Sides of prothorax straight and subparallel in front half *thoracicus*, Blackb.
- BB. Pronotum notably more strongly (but still sparsely and finely) punctulate.
 - C. Inner 4 interstices of the elytra absolutely flat (except third close to base and apex) *gracilis*, Blackb.
 - CC. Inner 4 interstices of elytra very evidently not flat *iridescens*, Blackb.
- BBB. Pronotum strongly and closely punctulate.
 - C. The third interstice of the elytra genuinely cariniform throughout (shoulders strongly produced).

- D. Elytral interstices distinctly punctulate ... *fossus*, Newm.
 DD. Elytral interstices scarcely visibly punctulate ... *ignarus*, Pasc.
 CC. The third interstice of the elytra not cariniform except near base and apex.
 D. Quasi-front angles of prothorax well defined.
 E. The sixth elytral interstice strongly cariniform in part of its hind half ... *cordicollis*, Blackb.
 EE. The sixth elytral interstice not cariniform.
 F. Middle of region of elypeal suture deeply impressed ... *popularis*, Blackb.
 FF. Surface of head quite evenly convex ... *equaliceps*, Blackb.
 DD. Quasi-front angles of prothorax quite rounded off.
 E. Head sparsely punctulate ... *sparsiceps*, Blackb.
 EE. Head coarsely punctulate.
 F. Clypens even ... *cribriceps*, Blackb.
 FF. Clypens longitudinally sulcate ... *viduatus*, Pasc.
 AA. The sulcus of the pronotum vaguely defined and shallow ... *Ericksoni*. Newm.

PYCNOMERUS.

This genus is regarded by Dr. Sharp as inseparable from *Penthelispa*, which Pascoe founded for species admittedly congeneric with *P. fuliginosus*, Er. There is no need to discuss here the correctness or otherwise of Dr. Sharp's pronouncement inasmuch as Pascoe appears to be clearly in error in regarding the European *Cerylon terebrans* as the type of *Pycnomerus*. Under the diagnosis of *Pycnomerus* Erickson states that he divides the genus into three sections the first of which consists (he says) of species having eleven-jointed antennæ, the second of species having antennæ ten-jointed, and the third eight-jointed; and then follows the description of *P. fuliginosa*. This evidently implies that the first section is to be treated as the typical one and it is difficult to understand why Pascoe regarded the second section as the typical one and proposed a new name for the first.

P. politus, Lea. Mr. Lea has been good enough to send me some specimens of this insect. An example of it from Queensland had been sent to me previously by M. Grouvelle as *P. secutus*, Pasc. I am of opinion that M. Grouvelle's identification is incorrect, for although Pascoe's description is much too brief to allow of certainty I have a species from Victoria (Pascoe's locality) which agrees better with the description of *secutus*. Mr. Lea's insect, however, seems to me to be probably the same species that Mr. Olliff ("Insects of Lord Howe Island," p. 10) mentions as occurring in Queensland and refers to *P. longulus*, Shp.,—a New Zealand insect. Unfortunately Olliff gives no authority for his reference and very strong authority would be required to establish its correctness. Dr. Sharp's description of *longulus* (like Pascoe's of *secutus*) is too brief to be of much value. This species therefore must be regarded as needing

further elucidation, but I think it most probable that Lea's name will stand.

P. obscurus, Pasc. This name seems to be without doubt a mere synonym of *P. fuliginosus*, Er. The two descriptions are almost in the same words. Pascoe must have overlooked Erickson's species, since if he had known it he could hardly have omitted to specify the characters by which he considered his species to differ from it. I have taken in Tasmania (Erickson's locality) and Victoria (Pascoe's locality) numerous examples which are evidently of but one species and which agree well with both descriptions. The pronotum varies slightly in the distinctness of its dorsal impressions and also in the sinuation of its sides, but the variations seem to occur equally among Tasmanian and Victorian specimens. I think this synonymy has not been previously noted.

P. robusticollis, sp. nov. Minus angustus; minus nitidus; sparsissime vix perspicue pubescens; nigro-piceus; capite crebre rugulose subgrosse punctulato, antice profunde bifoveolato; antennis crassis brevibus; prothorace leviter transverso, supra ut caput (quam *P. fuliginosi*, Er., multo magis profunde) punctulato, fovea magna subquadrata profunda (hac intus certo adspectu bifida) impresso, postice leviter angustato, lateribus sat rectis, angulis anticis prominentibus sat acutis posticis obtusis bene determinatis, margine antico fortiter sinuato; elytris fortiter crenato-striatis, interstitiis planatis seriatim punctulatis. Long., $2\frac{1}{5}$ l.; lat., $\frac{3}{5}$ l.

This species is near *P. fuliginosus*, Er., but very distinct from it, differing *inter alia* by its very evidently stouter antennæ, its prothorax distinctly wider than long and having *obtusè* hind angles, its head and pronotum much more deeply punctulate. The dorsal excavation of its pronotum is considerably deeper and more defined than that of any example I have seen of *P. fuliginosus*, Er. Viewed obliquely from behind, the excavation has much the appearance of the front excavation of *Bothrideres equinus*, Pasc.; viewed obliquely from in front it is seen to be divided into two sulci by a longitudinal convexity. Behind the middle of the base of the excavation is a shining unpunctured space much larger than that in any specimen that I have seen of *fuliginosus*.

Victoria.

P. interstitialis, sp. nov. Modice angustus; sat opacus; sparsissime vix perspicue pubescens; piceus, antennis pedibusque nonnihil rufescentibus; capite sat crebre sat rugulose nec profunde (ut *P. fuliginosi*, Er.) punctulato, antice profunde bifoveolato; antennis minus crassis (quam *fuliginosi* gracilioribus); prothorace quam latiori vix longiori, supra fere

ut caput sed paullo magis profunde punctulato, longitudinaliter in dorso leviter biimpresso, postice vix angustato, lateribus sat rectis, margine antico vix sinuato, angulis anticis haud prominentibus posticis leviter obtusis (fere rectis); elytris fortiter crenato-striatis, interstitiis angustissimis perspicue (nec alte) cariniformibus haud perspicue punctulatis. Long., $1\frac{3}{8}$ l.; lat., $\frac{1}{2}$ l.

The interstices of the elytra very narrow (fine cariniform lines) in themselves abundantly distinguish this species from the two previously described Australian *Pycnomeri* (*fuliginosus* and *robusticollis*) of the subopaque group.

Tasmania.

P. sulcicollis, sp. nov. Modice angustus; sat opacus; sparsim minus perspicue pubescens; obscure ferrugineus; capite sat crebre sat rugulose nec profunde (ut *P. fuliginosi*, Er.) punctulato, antice profunde bifoveolato; antennis (ut *fuliginosi*) sat crassis; prothorace quam latiori vix longiori, supra fere ut caput sed paullo magis profunde punctulato, in dorso longitudinaliter vix perspicue impresso, transversim paullo ante medium arcuatim sulcato (sulco ad medium obsoleto), postice leviter angustato, lateribus crenulatis antice sat arcuatis hinc retrorsum fortiter sinuatis, margine antico vix sinuato, angulis anticis haud prominentibus posticis fortiter obtusis sed ad apicem summum minute dentiformibus; elytris sat fortiter crenato-striatis, interstitiis angustissimis perspicue (nec alte) cariniformibus haud perspicue punctulatis. Long., $1\frac{7}{10}$ l.; lat., $\frac{1}{2}$ l.

The sculpture of its pronotum widely separates this species from all the previously described Australian *Pycnomeri*. That segment is slightly flattened dorsally with no well defined inequalities except an arched transverse sulcus slightly in front of the middle of the segment—the sulcus very faint in the middle and deep in the lateral region. The insect appears to be a genuine *Pycnomerus*. It is the most decidedly opaque species known to me of the genus.

Victoria (Dividing Range).

TABULATION OF CHARACTERS OF THE DESCRIBED AUSTRALIAN
PYCNOMERI OF THE OPAQUE OR SUB-OPAQUE GROUP.

A. Interstices of elytra flattened and conspicuously punctulate.			
B.	Hind angles of pronotum sharply rectangular (prothorax longer than wide)	...	...
BB.	Hind angles of pronotum obtuse (prothorax transverse)	...	...
AA.	Interstices of elytra convex, very narrow, and not distinctly punctulate.		
B.	Pronotum not transversely impressed	...	...
BB.	Pronotum transversely impressed about the middle	...	...

fuliginosus, Er.

robusticollis, Blackb.

interstitialis, Blackb.

sulcicollis, Blac

CERYLON.

The following species is closely allied to some of the European members of the genus *Cerylon*, which genus in Lacordaire's classification belongs to a "Tribe" of the *Colydiidæ* that has not—so far as I know—been previously reported as Australian.

C. alienigenum, sp. nov. Minus convexum, sat latum (forma fere ut *C. ferruginei*, Steph.); obscure ferrugineum, prothorace piceo; nitidum; antennis (fere ut *C. ferruginei*, sed clava breviori latiori) sat robustis, articulis 2^o 3^o que brevibus; capite subtilissime punctulato; prothorace subquadrato, supra quam *ferruginei* minus fortiter minus crebre punctulato, ad basin utrinque profunde impresso; elytris punctulato-striatis, striis profundis versus apicem (subsuturali excepta) obsolete (subsuturali antice abbreviata, 2^a 4^a basin attingentibus, 5^a 6^a que antrorsum parum ultra medium productis, interstitiis latis planis vix perspicue punctulatis; sternis et segmento basali ventrali ad latera grosse sparsim punctulatis; hoc in medio oblique bistriato (fere ut *Diphylli*). Long., 1 l.; lat., $\frac{2}{3}$ l.

Like the European *C. ferrugineum*, Steph., in form and color except in the prothorax being considerably darker than the elytra. The pronotum (compared with that of others known to me of the genus) is less strongly and less closely punctulate. The fifth and sixth striæ of the elytra are very short.

N.S. Wales.

CUCUJIDÆ.

PROSTOMIS.

The members of this genus (especially males) seem to be rare in collections, and the species are closely allied *inter se*.

P. Atkinsoni, Waterh. I have taken in Tasmania (and have received from several Tasmanian correspondents) a *Prostomis* which I presume to be this species. I cannot say that it agrees very exactly with the description; but weighing in combination the two facts—that I have seen no other *Prostomis* from Tasmania and that this particular one is the only *Prostomis* I know with the puncturation of the head and pronotum very fine (a character which its author attributes to *P. Atkinsoni*)—I do not see much room for doubt. The principal differences are as follows:—Waterhouse calls the sides of the prothorax "vix arcuatis," whereas in the species before me they are certainly more rounded (especially in the male) than that expression makes them; Waterhouse's sexual distinctions do not fit the species before me. I have two specimens taken under the bark of one tree which I cannot doubt are male and female of a single species—one of them, which I have no doubt is the male, is Long., $4\frac{1}{2}$ l.

(the other being Long., $3\frac{1}{2}$ l.) and has mandibles much more developed than the other, considerably longer antennæ, a much larger and wider head, and a larger prothorax (of which the sides are quite strongly rounded). Waterhouse makes no reference to any sexual difference in the antennæ, calls the sculpture of the female "more distinct throughout" and says that its prothorax is constricted behind the front angles (it is slightly so in the specimen I have above called the male, but not in the other). My specimens do not show any noticeable difference in the sculpture (i.e. puncturation and striation) between the sexes. I do not think Waterhouse *reversed* the sexes, as his description of the form of the mandibles is inconsistent with his having done so. It will be noted that the sexual distinctions as I have described them are very similar to those of many *Læmophlœi* and other *Cucujidæ*. In this species the left mandible and jugular process are considerably longer than the right. The apical ventral segment is somewhat narrowly rounded in both sexes and in the male (as in others of the genus) is thickened and somewhat reflexed round its apex. The left jugular process bears an external obtuse feebly defined tooth considerably in front of the middle and at the apex is dilated and truncate—the truncate front margin being subdentiform at both ends (especially the external end).

P. intermedius, Blackb. My description of this species needs amending, as at the time I made it I had not before me specimens of any *Prostomis* that I could rely upon as being the sexes of one species and consequently I treated sexual characters as specific. The type is a female and I have since taken a specimen in the Victorian Dividing Range which I have no doubt is its male. It will be convenient to substitute the following for the original description.

Mas. *Elongatus*; *angustus*; *postice sat fortiter angustatus*; *nitidus*; *glaber*; *piceus*, *capite prothorace pedibus maculisque in elytris nonnullis indeterminatis rufescentibus*; *mandibulis minus latis, valde elongatis, crebre subtilius punctulatis, ad latera modice angulatis, sinistro quam dexter longiori*; *processibus jugularibus inter se disparibus, sinistro longe ultra medium dente externo armato hinc ad apicem acuminato (apice ipso sat acuto, oblique intus et deorsum curvato), dextro multo breviori leviter sinuato ad apicem acuminato*; *capite quam corpus ceterum latiori, sparsim subtiliter punctulato, postice transversim sulcato (sulco fortiter punctulato)*; *antennis sat elongatis, prothoracis basin fere attingentibus, articulis 3° quam latiori paullo longiori 9°—11° clavam male definitam formantibus (9° 10° que vix transversis)*; *prothorace sat quadrato sed leviter transverso, sparsim subtiliter*

punctulato, obsolete canaliculato (canali et antice et postice sat late abbreviato), lateribus minus arcuatis, angulis obtusis nullo modo prominentibus; elytris punctulato-striatis (sculptura apicem nec basin versus obsoleta), striis 4° 5° que et interstitio 5° pone humerum sat fortiter depressis. Long., $5\frac{2}{3}$ l.; lat. (trans caput), 1 l.

Fem. minore (Long., 4 l.); colore (exempli typici) toto luteo; mandibulis processibus jugularibus antennisque brevioribus; capite paullo minus lato, magis convexo.

In my original description the term "subtilissime punctulata" applied to the head and pronotum is not a happy one in view of the fact that the same in *Atkinsoni* are still more finely punctulate. The left mandible of the male is nearly twice as long as the interval between the clypeal suture and the posterior transverse sulcus of the head—that of the female nearly once and a half the same interval. Compared with the species I have identified with *P. Atkinsoni* (see above) this species is considerably less finely and less sparsely punctulate on the mandibles head pronotum and metasternum; its mandibles are considerably longer and narrower in both sexes, its antennæ are a trifle shorter and stouter in both sexes (the third joint, especially, being shorter), the left jugular process is of a very different shape, the punctulate striæ are evidently better defined close to the base, and the post-humeral depression is much stronger (in *Atkinsoni* almost obsolete); this consists of a slightly elongate gentle concavity extending in width from the fourth to the sixth interstice, and therefore including two striæ and the interval between them. I attach very little importance to the difference in colour.

Victoria.

P. cornutus, Waterh. My example of this species is a female (Long., $2\frac{1}{2}$ l.). Its antennæ are a trifle (and its mandibles much) shorter than those of *intermedius*. The left mandible is a little longer than the right, but the two jugular processes are alike in size and shape. These latter are devoid of a defined external tooth and are of sinuate-acuminate shape from the middle to the apex, where they are sharply pointed. The third joint of the antennæ is not longer than wide. The well-defined round fovea on the clypeus (referred to by Waterhouse) is probably a reliable character. The longitudinal channel of the pronotum is considerably more defined than in any other *Prostomis* known to me. The position of the jugular processes rendering them visible from above is a very remarkable character. The prothorax is not transverse.

P. gladiator, sp. nov. Fem. Elongatus; angustus; postice minus angustatus; nitidus; glaber; rufo-ferrugineus, antennis

mandibulisque nonnihil obscurioribus; his minus elongatis minus latis, ad latera vix angulatis, cetera ut *P. intermedii*, Blackb.; processibus jugularibus fere ut *P. intermedii* sed sinistro externe inermi; capite fere ut *P. intermedii* sed paullo minus lato; antennis quam *P. intermedii* paullo gracilioribus vix brevioribus, articulis 3° quam latiori vix longiori 10° manifeste transverso; prothorace vix transverso, antice subangustato, cetera ut *P. intermedii*; elytris fere ut *P. intermedii* sed pone humeros vix perspicue depressis. Long., $3\frac{1}{2}$ l.; lat., $\frac{4}{5}$ l.

This species is so like *P. intermedius* (of the same sex) that it seems unnecessary to repeat the diagnosis of that species in all its details; it may be read as the diagnosis of *P. gladiator* subject to the qualifications specified above. Compared with *intermedius* (female) the mandibles are distinctly shorter (the left one not much longer than the distance from the clypeal suture to the transverse sulcus) and scarcely angulate externally, the left jugular process has no external tooth, the antennæ are more slender with the third joint distinctly shorter and the tenth a trifle more transverse, the head is very evidently narrower and more convex, the prothorax is very conspicuously narrower with its front decidedly narrower than its base, and the elytra are almost without any post-humeral impression and also are less narrowed behind. It was on the authority of this insect that in my original description of *P. intermedius* I gave N.S. Wales as a habitat, thinking that the differences between *intermedius* and *gladiator* might be sexual—which, however, I now know they are not.

N.S. Wales (Blue Mountains); given to me by the late Mr. Olliff.

TABULATION OF THE DESCRIBED AUSTRALIAN SPECIES OF PROSTOMIS.

- | | | |
|-----|---------------------------------------------------------|-------------------------------------|
| A. | Jugular processes invisible from above. | |
| B. | Left jugular process acute at apex. | |
| C. | Left jugular process toothed externally before the apex | <i>intermedius</i> , Blackb. |
| CC. | Left jugular process unarmed externally | <i>gladiator</i> , Blackb. |
| BB. | Left jugular process dilated and truncate at apex | <i>Atkinsoni</i> , Waterh. ? |
| AA. | Jugular processes visible from above | <i>cornutus</i> , Waterh. |

IPSAPHES.

This name cannot stand, as it is undoubtedly a synonym of *Platysus*—indeed I have no doubt of *I. mærosus*, Pasc. (the type of *Ipsaphes*), being even specifically identical with *P. obscurus*, Er. (the type of *Platysus*). Pascoe's action in founding *Ipsaphes* is incomprehensible since the most noteworthy

distinction he indicates from *Platistus* is "the denticulate margins of the prothorax," and Erickson in describing *P. obscurus* had written "margine (thoracis) denticulato." I suppose Pascoe must have compared his insect with some specimen that was wrongly named *Platistus* and have not referred to the diagnosis of the genus. I have not seen any previous note of this synonymy.

I. bicolor, Olliff. This insect is certainly not a *Platistus*, and I can find no reason to separate it from *Cucujus*. It has the basal joint of the tarsi very short. It must be extraordinarily close to *Cucujus coloniarius*, Olliff. Their author published the description of the two in the same memoir and stated that the two had been taken in company. Both descriptions are decidedly lengthy and yet almost identical; comparing them together the only definite points of difference I can find are that the clypeus in *coloniarius* is "truncate" in front and in *bicolor* "very slightly emarginate," the antennæ in *coloniarius* "rather longer than" (in *bicolor* "about as long as") the head and prothorax, the sides of the prothorax in *coloniarius* "feebly serrate" (in *bicolor* "provided with short blunt teeth"), the scutellum in *coloniarius* "rounded" (in *bicolor* "somewhat pointed") behind, and a few other such slight variation of terms; also the under-surface of *coloniarius* is called "black" (without qualification) and that of *bicolor* "black, with the abdominal segments rather bright red." Various characters—e.g. those of the angles of the prothorax—are described in respect of one or other only of the two (if they are two) species. Strange to say, although he described on successive pages of his memoir these two insects taken in company, of practically the same size, and evidently of remarkable superficial similarity *inter se*, Olliff makes no remark on their resemblance to each other and does not mention the characters of either in describing the other. Nevertheless I am disposed to believe that he had before him two valid species of *Cucujus* on the following grounds:—I have before me specimens of an insect which I have taken somewhat freely on the Victorian Mountains and which there can be no doubt is *Ipsaphes bicolor*, Oll. (though, as stated above, it is certainly not congeneric with *I. moerosus*, Pasc., *Platistus*, Er.). In a fairly long series there is not one with a black abdomen—though several have the abdomen slightly spotted with black. In combination with that undoubted color difference, I find that the specimens in question do not agree with the description of *coloniarius* in an important character, the hind angles of the prothorax being sharply rectangular (even subdentiform), whereas Olliff says that those angles in *coloniarius* are "rounded"—he does not specify their character in *bicolor*. The only conclusion possible

therefore is that the two species although congeneric and greatly resembling each other superficially, are distinct.

LÆMOPHLÆUS.

The Australian species of this genus are moderately distinct *inter se*, most of them having some strongly marked character. Unfortunately, however, some of them have been very insufficiently described. Two cosmopolitan species have been reported from Australia (*ferrugineus*, Steph., and *pusillus*, Schönh.), and also *L. testaceus*, Fab. I do not know whether there is any authority for the occurrence of the last-named beyond its mention as Australian by Mr. Olliff; as will be seen below. I doubt whether the insect that author referred to is really *testaceus*. The specific characters of *Læmophlæi* are strongly marked, in some cases in the sexual characters, in some in the colour and pattern, in some in the structure of the prothorax or elytra. The striation of the elytra is of a peculiar kind and appears different in the same specimen from different points of view, so that different authors state their number differently (e.g. the dorsal striæ of *L. ferrugineus*, Steph., are stated by its author to be three, but Erichson calls them four). If a specimen of that insect be held obliquely with its head directed towards the observer there seem to be numerous ill-defined striæ but if it be looked at from the side (across the specimen) there is a certain point of view from which it seems to have very distinctly only three dorsal striæ. This introduces an element of uncertainty into descriptions of *Læmophlæi* which merely state that the elytra have such-and-such a number of dorsal striæ, and therefore in the following descriptions I endeavour to indicate the nature of the striation more exactly. The only Australian *Læmophlæi* that I have seen not having the dorsal striæ of their elytra of the same character as in *ferrugineus* are *amabilis*, Oll., and the species described below as *L. Frenchi*, in which the intermediate feeble striæ that in the other species are visible from favorable points of view are all but non-existent. Among the Australian *Læmophlæi*, however, the striation of the elytra does not seem to me in general a very useful character for the determination of species. In tabulating the species of this genus the structure of the prothorax seems to form the best character for constructing groups.

The following tabulation of the characters of the described Australian *Læmophlæi* includes all that I can ascertain to have been described. Some of the species are unknown to me in nature and these I have placed on the authority of descriptions and figures. In some instances I have had to assume the absence of a character from its not being mentioned in the description—

especially I have assumed that the sublateral striæ of the pronotum are not of conspicuously exceptional structure where their structure is not stated to be so. To guard against possible error through this assumption the names of the species concerning which there is such doubt are in italics :—

- A. Pronotum with only one well defined stria on either side.
 B. The front angles of the prothorax not distinctly defined (when viewed from above).
 C. Sides of prothorax strongly rounded (antennæ of male very remarkable) ... diemenensis, *Blackb.*
 CC. Sides of prothorax at most feebly arcuate.
 D. Disc of pronotum bearing a shining tubercle.
 E. Form very narrow and elongate.
 F. Hind angles of prothorax sharp (as seen from above) ... murrayensis, *Blackb.*
 FF. Hind angles of prothorax obtuse (as seen from above) ... pusulæ, *Blackb.*
 EE. Form much wider and less elongate... pusillus, *Schönh.*
 DD. Disc of pronotum even.
 E. Prothorax not (or very slightly) narrowed behind ... Lindi, *Blackb.*
 EE. Prothorax much narrowed behind.
 F. Form very narrow and fragile ... insignior, *Blackb.*
 FF. Form much more robust ... ferrugineus, *Steph.*
 BB. The front angles of the prothorax well defined.
 C. Pronotum and elytra not bearing rows of tubercles.
 D. Prothorax wider than long.
 E. General colour testaceous or light brown —no well defined markings.
 F. The sublateral striæ of the pronotum simple.
 G. Forehead with a longitudinal impressed line.
 H. The intermediate dorsal striæ of the elytra present.
 I. Front angles of prothorax decidedly dentiform ... testaceus, *Fab.*
 II. Front angles of prothorax not dentiform ... contaminatus, *Gr.*
 HH. The intermediate dorsal striæ of the elytra obliterated as striæ ... lepidus, *Gr.*
 GG. Forehead not having an impressed longitudinal line.
 H. Prothorax strongly transverse ... conterminus, *Oll.*
 HH. Prothorax feebly transverse ... Leachi, *Gr.*
 FF. Sublateral stria of pronotum very much deepened on its hind half.
 G. Form comparatively narrow.
 H. Antennæ of female rather elongate and scarcely clubbed ... Macleayi, *Oll.*
 HH. Antennæ of female quite short and rather distinctly clubbed ... difficilis, *Blackb.*

- GG. Form notably wider *rigidus*, *Oll.*
 FFF. Sublateral striæ of pronotum dilated into a deep wide fovea behind middle Australasiæ, *Blackb.*
 EE. Elytra with well defined markings,
 F. General colour testaceous—markings of the elytra dark.
 G. The intermediate dorsal striæ of the elytra obliterated as striæ.
 H. Elytra with a large humeral spot (and a submedian fascia) *amabilis*, *Oll.*
 HH. Elytra not having a humeral spot (only a postmedian fascia) *insignis*, *Gr.*
 GG. The dorsal striæ of the elytra normal *tasmanicus*, *Gr.*
 FF. General colour dark. Elytra with pale markings.
 G. General colour metallic green *Ramsayi*, *Oll.*
 GG. General colour blackish (antennæ of male very remarkable) *Frenchi*, *Blackb.*
 DD. Prothorax not wider than long *parvulus*, *Gr.*
 CC. Pronotum and elytra having rows of tubercles *tuberculatus*, *Gr.*
 AA. Pronotum with two well defined sublateral striæ on either side *bistiatus*, *Gr.*

L. diemenensis, sp. nov. Mas. Depressus; sat latus; nitidus; vix pubescens; testaceo-brunneus; capite magno, quam prothorax vix angustiori, subtiliter minus crebre punctulato, postice in medio leviter foveolato (fovea antrorsum subtiliter lineatim producta), clypeo antice truncato; oculis parvis; antennis quam caput prothoraxque conjuncta paullo longioribus, articulis basali quam sequentes 5 vix breviori fortiter arcuato (ut *L. Fauveli*, Gr., sed ad apicem parum dilatato) ad apicem late truncato, 2°—7° (2° 7° que leviter, 3° 6° que fortiter, 4° 5° que fortissime) transversis, 8° parvo, 9° 10° que quam hic sat longioribus, 11° quam 10^{us} fere duplo longiori; prothorace quam longiori ut 3 ad 2 latiori, postice parum angustato, sparsius subtilius punctulato, utrinque unistriato, disco planato, lateribus sat fortiter arcuatis, angulis anticis (superne visis) haud bene definitis posticis minute dentiformibus; elytris (certo adspectu) striis dorsalibus 3 (ut *L. ferruginei*, Steph.) impressis, latera versus carinatis, interstitiis leviter punctulatis. Long., 1½ l.; lat., ½ l.

The remarkable antennæ of this species at once distinguish it from all its Australian congeners and from all other *Lamophlæi* known to me. It seems to be allied to *L. Fauveli*, Gr., which it somewhat resembles in outline, but the antennæ of the male are very different, it is differently colored, its eyes are much smaller than those of *Fauveli* appear in the figure, &c.

Tasmania.

L. murrayensis, sp. nov. Mas. Sat angustus; modice elongatus; nitidus; parum pubescens; testaceus; capite quam prothorax haud angustiori, subtiliter minus crebre punctulato, sat convexo, utrinque longitudinaliter impresso, sulco mediano nullo, clypeo antice subtruncato; antennis gracilibus, quam corpus haud multo brevioribus, articulis apicalibus quam latioribus multo longioribus; prothorace parum transverso, postice leviter angustato, supra subtiliter subsparsum punctulato, utrinque subtiliter unistriato, disco planato pernitido tuberculo parvo vix pone medium instructo, lateribus leviter arcuatis, angulis anticis (superne visis) haud bene definitis posticis sat acute rectis; elytris (certo adspectu) striis dorsalibus 3 (ut *L. ferruginei*, Steph.) impressis, latera versus tenuiter carinatis, interstitiis perspicue punctulatis.

Feminae capite angustiori, antennis quam caput prothoraxque conjuncta parum longioribus, articulis $9^{\circ} 10^{\circ}$ que quam latioribus vix longioribus; forma magis elongata, magis parallela. Long., $\frac{4}{5}$ l.; lat., $\frac{3}{10}$ l. (fere).

The form and proportions of this species (especially the female) are well represented by M. Grouvelle's figure of *L. bistriatus* (Ann. Soc. Ent. Fr., 1877, Pl. ii., fig. 8), but I cannot find any trace of duplication in the striæ of the pronotum, and the punctures of the head and pronotum are very much closer than they are represented in that figure. It belongs to the group of *Læmophlæi* having a single stria on either side of the pronotum and the front angles of that segment not prominent, of which the described species already known as Australian are *ferruginei*, Steph., *parvulus*, Gr., and *pusillus*, Schönh. I took a single example on the Victorian mountains of a *Læmophlæus* (female) which is extremely close to *Murrayensis* but probably distinct. Its prothorax is considerably more narrowed behind and not flattened dorsally; its tubercle also is smaller and nearer to the front. It is better, however, in the case of so extremely close a species not to describe without seeing the male.

S. Australia (near Murray Bridge).

L. Lindi, Blackb. In my diagnosis of this species (P.L.S., N.S.W., 1888, p. 841) I characterised its pronotum as "utrinque subtiliter bistriatum" and in the remarks that followed I noted the external of the two striæ as "extremely fine and scarcely continuously traceable." Since the issue of that diagnosis I have had the opportunity of examining numerous specimens of the same species and find that in some of them this second stria is so faint and fragmentary as to be practically wanting. Unfortunately I do not possess an example, for comparison, of any of the very few other species of the genus that have been diagnosed as

with the pronotum "utrinque bistriatum" but an examination of the figures of some of them leads me to think that (at any rate in some—probably all) the second stria is very clearly defined and not much different from the inner one. The pronotum of *Lindi* therefore should I think be called "utrinque unistriatum" with the qualification that in some examples there are faint traces of a second stria. I find also that the short furrow on the forehead (referred to in my diagnosis) is not at all clearly defined in some examples and is not a character on which much reliance can be placed. It seems therefore desirable to furnish an amended diagnosis, which will be found below. Unless all the examples that I have seen are of one sex the sexual distinctions of this species are extremely slight, as in all of them the head is scarcely as wide as the prothorax, and there is very little difference in the antennæ. In some, however, the antennæ seem to be slightly longer—especially their ninth and tenth joints—than in others. I may add that I have a specimen from the Victorian mountains which differs from my South Australian specimens in having the pronotum evidently less closely punctured, with the disc flattened, otherwise presenting no notable distinction. It is probably another species, but more specimens should be examined before it is described.

Elongatus; angustus; postice leviter angustatus; nitidus; rufotestaceus; capite (exemplorum visorum) quam prothorax parum angustiori, sat convexo, subtiliter crebrius punctulato, utrinque longitudinaliter vix impresso, sulco mediano brevi (leviter vel vix) impresso, clypeo antice subtruncato; antennis modicis, quam caput prothoraxque conjuncta vix longioribus, articulis 9° 10° que quam latioribus paullo vel vix longioribus; prothorace quam longiori parum latiori, postice parum angustato, supra fere ut caput punctulato, utrinque unistriato (nonnullorum exemplorum stria secunda obsolete impresso), lateribus parum arcuatis, angulis anticis (superne visis) haud bene definitis posticis sat acute rectis; elytris (certo adspectu) striis dorsalibus 3 (ut *L. ferruginei*, Steph.) impressis, latera versus tenuiter carinatis, interstitiis punctulatis. Long., 1 l.; lat., $\frac{3}{10}$ l. (vix).

S. Australia.

L. pusulæ, sp. nov. Fem. Elongatus; nitidus; parum pubescens; testaceus; capite quam prothorax vix angustiori, minus subtiliter crebrius punctulato, minus convexo, utrinque longitudinaliter impresso, sulco mediano nullo, clypeo antice vix emarginato, antennis gracilibus quam caput prothoraxque conjuncta vix longioribus, articulis 9° 10° que transversis (his cum 11° clavam sat distinctam formantibus); pro-

thorace leviter transverso, postice manifeste angustato, supra crebre subfortiter punctulato, utrinque subtiliter unistriato, disco planato tuberculo elongato sat magno instructo, lateribus parum arcuatis, angulis anticis (superne visis) haud bene definitis posticis (superne visis) obtusis sed sursum subdentiformibus; elytris (certo adspectu) striis dorsalibus 3 (ut *L. ferruginei*, Steph.), impressis, latera versus tenuiter carinatis, interstitiis perspicue punctulatis. Long., $\frac{4}{5}$ l.; lat., $\frac{2}{10}$ l. (fere).

A narrow elongate parallel species resembling *L. murrayensis* in form and proportions and belonging to the same group, but very distinct from it by the much shorter antennæ (at any rate of the female, in which sex the apical three joints form a more evident club than is usual in the genus), the notably stronger and closer puncturation of the pronotum (which, moreover, bears a larger and differently shaped tubercle) and the obtuse (as seen from above) hind angles of the prothorax. These angles, however, are minutely turned up in a subdentiform fashion at their extreme apex, so that if looked at very obliquely from the side—across the insect—they do not appear to be obtuse.

S. Australia (Port Augusta).

L. insignior, sp. nov. Fem. Sat angustus; modice elongatus; postice manifeste angustatus; nitidus; parum pubescens; testaceus, elytris (exempli typici) postice infuscatis; capite quam prothorax vix angustiori, subtilissime punctulato, minus convexo, sat æquali, clypeo antice subtruncato; antennis sat gracilibus, quam caput prothoraxque conjuncta vix longioribus, sat moniliformibus, articulis 9° haud 10° vix quam latioribus longioribus (his cum 11° clavam manifestam formantibus); prothorace parum transverso, postice sat fortiter angustato, supra crebre subtilissime punctulato, utrinque subtiliter unistriato, disco vix planato, lateribus antice modice arcuatis postice subsinuatis, angulis anticis (superne visis) haud bene definitis posticis minutissime dentiformibus, elytris (certo adspectu) striis dorsalibus 3 (ut *L. ferruginei*, Steph.), impressis, latera versus tenuiter carinatis, interstitiis obsolete punctulatis. Long., $\frac{7}{10}$ l.; lat., $\frac{3}{10}$ l. (fere).

This minute species resembles all the preceding in the scarcely marked front angles of its pronotum and the single stria on either side of the same. It is, however, of less parallel form, and its prothorax is very manifestly more narrowed behind and is punctured on its dorsal surface almost as finely and closely as that of *L. ferrugineus*, Steph. It differs also from *L. murrayensis* and *pusulæ* in the even surface of its head and pronotum, from

lindensis by the evidently shorter antennæ—at any rate, of the female—from *parvulus*, Gr., by its shorter prothorax which is not wider than the elytra, from *ferrugineus* by its much smaller size, much narrower build, prothorax less narrowed behind, &c., from *pusillus* by its very much narrower form prothorax narrowed behind, &c.

Victoria, (Dividing Range).

L. pusillus, Schönh. I have four Australian specimens that have been examined by M. Grouvelle—the well-known specialist on this group—and ticketed "*L. pusillus*." They—and other Australian examples before me of the same species—all have a small shining tubercle about the centre of the disc of the pronotum. This character is not mentioned in Erichson's somewhat lengthy description of the insect (Ins. Deutschl., III., p. 321). I have not Schönherr's original description available. Examples from other parts of the world bearing the same name all present this character.

L. articeps, Olliff. This species is very close to—if not identical with—*L. tasmanicus*, Gr. Olliff's remark on it is "appears to be more nearly allied to *L. tasmanicus* than to any other species," but he adds no mention of the distinctive characters. Both descriptions are fairly full and they agree so exactly in respect of the leading characters—e.g. the remarkable coloring and pattern of the elytra, and the notably strong impression of the fourth elytral stria—that in spite of some little discrepancies in the language employed to characterise the punctuation I can hardly think them founded on two species. I have before me examples from the Victorian mountains (whose Coleopterous fauna is closely allied to that of Tasmania—Grouvelle's locality) and N.S. Wales (which Olliff quotes for *articeps*) which agree in all their strongly marked characters with those set forth in both descriptions. The specimen from N.S. Wales is undoubtedly a trifle less strongly punctulate than the Victorian ones of the same sex—from the descriptions *articeps* appears to be less strongly punctured than *tasmanicus*—but certainly not so markedly as to in itself justify specific distinction. I cannot think it in the least likely that I have before me a species with the same unusual elytral pattern and other strongly marked characters as the specimens that Olliff and Grouvelle described, and yet distinct from them, but undoubtedly my examples present some characters which I cannot understand both those authors passing over without note—for the lateral outline of the prothorax is quite evidently trisinuate and the space on the pronotum intermediate between the lateral stria and the lateral margin bears a deep transverse furrow slightly behind its middle. I may add that one of my specimens was sent to me by Mr. Lea ticketed as "*L. articeps*, Oll."

L. Macleayi, Olliff. This species is practically undescribed. It is the insect on which Macleay founded his genus *Placonotus*—which is in no way different from *Læmophlæus* (as Olliff testified after examining the type). Macleay called his species *longicornis* (a nom. præocc. in *Læmophlæus*) and Olliff renamed it *Macleayi*. Macleay's very brief description is quite worthless, and would apply to many *Læmophlæi*. Unfortunately Olliff did not describe it, but merely remarked on its resemblance to *L. testaceus*, Fab., and pointed out a few differences (from *testaceus*) so slight that I am convinced it is not really distinct from the insect which Olliff regarded as *testaceus*. But here again there is a further difficulty in Olliff's having given no description whatever of the species that he calls *testaceus*. The only indication he furnishes for the identification of the latter is to be found in his remark that it is common and widely distributed. By means of this clue, however, I feel satisfied that I can identify the *Læmophlæus* to which he applied the name. I have collected the insect in question and received it from other collectors plentifully—its localities ranging from Cairns to Tasmania and Eyre's Peninsula. I cannot think it the species that Erichson (*Ins. Deutsch.* III., p. 320) describes as *testaceus*, Fab., and which I believe is generally accepted as being correctly identified by him—inasmuch as *inter alia multa* Erichson places first among the characters rendering it "easily recognisable" the presence of a longitudinal impressed line on the head—which line is certainly not present in the Australian insect. The following is a description of the salient characters of the latter:—(as the result of examining numerous specimens); head with its general surface even or almost even—the clypeal suture, however, strongly impressed; antennæ of male not much shorter than the body (of the female considerably shorter) with the basal joint decidedly large—very little indication of a club in either sex; prothorax not strongly transverse, its front angles dentiform, one stria (very much deeper and wider in its hind than in its front half) on either side of the pronotum; very variable in size.

A few of the specimens before me if isolated from the rest might appear to represent species distinct from each other as they differ a little in the development of characters that are sexual—the head being a trifle larger and the antennæ a trifle longer in some males than in others, and the length of the antennæ varying slightly in the females—but after careful examination of a great number of examples I am unable to divide them in any satisfactory manner—for example, of two males certainly taken in company and between which I can find no other distinction one certainly has longer antennæ than the other. If I am right

in regarding this long series as representing but one species it is distinguishable from all the other described Australian *Læmophlœi* (except *rigidus*, Oll., and *difficilis*, Blackb.), of uniform testaceous coloring (or only vaguely clouded with slight infuscation) and having the front angles of the prothorax dentiform, by the sublateral striæ of its pronotum being much stronger in their hind than in their front half. *Rigidus*, Oll. (being quoted as resembling *Beccari*, Gr., in outline) seems to be of decidedly broader form than any of the specimens before me, and the antennæ of the female of *difficilis*, Blackb., seem to me too decidedly shorter and more distinctly clubbed to be treated as the result of mere variety—but I am not very confident that even those two will stand permanently as really good species: If I am right in thinking this widely distributed species distinct from *testaceus*, Fab., it will, I think, have to bear the name *Macleayi*, Oll.

L. Australasiæ, Blackb. This species is extremely distinct from the preceding by *inter alia* the sublateral striæ of its pronotum being dilated behind their middle into a large and deep oval fovea. The coloring of the elytra to which I referred in my original description is not a reliable character as I have recently seen specimens in which the sub-apical infuscation of the elytra is only slightly developed.

L. Frenchi, sp. nov. Mas. Brevis; sat latus; modice depressus; minus nitidus; brevissime sparsim pubescens; nigro-piceus, antennis pedibus scutello macula parva humerali elytrorum apice et in elytrorum disco maculis nonnullis ferrugineis (nonnullorum exemplorum capite et prothoracis disco nonnihil rufescentibus); capite quam prothorax paullo angustiori, confertim subtilissime punctulato, inter antennas late leviter concavo et in medio linea longitudinali subtili impresso; antennis quam corpus haud multo brevioribus, articulis basali quam sequentes 4 vix breviori ad apicem intus fortiter hamato, 2° subglobulo, 3° quam hic sat minori, 3°—7° gradatim paullo longioribus, 8° breviori, 9° quam 8^{as} fere duplo longiori, 9°—11° inter se subæqualibus; prothorace fortiter transverso supra creberrime vix perspicue punctulato, utrinque subtiliter unistriato, inter striam et medium segmentum longitudinaliter leviter concavo, lateribus modice arcuatis, angulis anticis bene determinatis (haud dentiformibus) acutis posticis acute rectis; elytris striis dorsalibus 3 impressis, latera versus carinatis, interstitiis creberrime vix perspicue punctulatis.

Fem. antennis quam corpus multo brevioribus, articulo basali quam sequentes 2 conjuncta breviori, haud hamato. Long., $\frac{4}{5}$ l.; lat., $\frac{3}{10}$ l. (vix).

The great enlargement and distortion of the basal joint of the antennæ in the male distinguishes this species from all other Australian *Læmophlœi* of which the male has been described except *L. diemenensis*, and no other resembles it in colour and markings unless it be *L. Ramsayi*, Oll., which is described as of dark colour with testaceous markings, but its general colour is said to be metallic green with an ante-median elytral testaceous fascia, whereas the present species is blackish with a small humeral spot, two discal postmedian spots and the apex reddish. It is the only Australian *Læmophlœus* that I have seen having the dorsal striæ evidently (from all points of view) only three in number.

Victoria (Dividing Range); also sent by Mr. French.

PLATYCOTYLUS.

P. coloratus, sp. nov. Nitidus; niger; ore antennarum basi pedibusque dilutioribus, elytris macula magna rubra discoidali ornatis; capite crebre sat fortiter punctulato; antennis quam corporis dimidium paullo brevioribus; prothorace quam longiori ut 5 ad 3 latiori, postice angustato, sat fortiter vix crebre punctulato, angulis omnibus dentiformibus, lateribus leviter arcuatis, basi media leviter impressa; scutello fortiter transverso; elytris sat fortiter punctulato-striatis, interstitiis seriatim punctulatis (5° 7° que cariniformibus), sutura pone scutellum concava. Long., $1\frac{1}{2}$ l.; lat., $\frac{1}{2}$ l.

Smaller than the typical species (*P. inusitatus*, Oll.) and—judged by Olliff's measurements—of narrower form; also very differently colored, and with much stronger puncturation of the pronotum, which in *P. inusitatus* is said to be "very fine."

Queensland (taken by Mr. Dodd).

LATHROPUS.

I refer to *Lathropus* a small *Cucujid* which I met with under the bark of Eucalyptus on the Victorian Mountains. It has the general appearance of *Læmophlœus*, but differs from it by the short inconspicuous apical spine of its front tibiæ, by its short antennæ with an abruptly clavate apex of three joints and by its tarsi with the basal four joints all very short—the first scarcely visible—and together scarcely half as long as the fifth joint. *Lathropus* is a widely distributed genus, having been recorded from South America as well as Europe (the habitat of the typical species)—possibly also from other places—but it has not been hitherto known as Australian.

L. brightensis, sp. nov. Sat elongatus; modice depressus; modice nitidus; tenuissime sparsim pubescens; testaceo-ferrugineus, elytris circa scutellum et ante apicem infuscatis vel piceis; capite subconvexo quam prothorax angustiori,

crebre sat fortiter punctulato, fronte antice emarginata, sutura clypeali profunda; antennis prothoracis basin haud attingentibus, articulis 1° 2° que incrassatis 3°—8° brevibus parvis 9° 10° que transversis (his cum 11° ovali clavam sat abruptam formantibus); prothorace quam elytra paullo angustiori, quam latiori sublongiori, antice leviter angustato, supra crebre fortiter punctulato, carina mediana longitudinali obsoleta instructa, ante basin impresso, utrinque prope marginem lateralem carina subtili ornato, lateribus leviter arcuatis, angulis omnibus obtusis; elytris striatis, interstitiis hic et illic obtuse convexis sparsim leviter punctulatis. Long., $\frac{4}{5}$ l.; lat., $\frac{3}{10}$ l. (vix).

Victoria (mountains near Bright).

MYRABOLIA.

Species of this genus seem to be numerous in Australia, and are closely allied *inter se*. In this paper I offer descriptions of two new ones and also furnish a table showing the distinctive characters of the hitherto described species. The two described by Reitter (as noted more fully below) are placed in the tabulation by virtue of the characters observed in a specimen (of one of them) named by M. Grouvelle rather than on the characters assigned in the descriptions. If they are not Reitter's species I am convinced that the latter are unknown to me—which is not probable, especially since some of my specimens are from Reitter's locality (Tasmania). The character "dorsal striæ of the elytra doubled" will be found explained below under *M. longicornis*.

TABULATION OF SPECIES OF MYRABOLIA.

- A. Dorsal striæ of the elytra doubled.
- B. A dorsal impression (not a mere flattening)
on front part of pronotum ... *haroldiana*, Reitt.
- BB. No dorsal impression on the pronotum ... *parva*, Blackb.
- AA. The striæ of the elytra about 9 in number.
- B. Elytral interstices with a very clearly defined
single row of large punctures (scarcely
smaller than those of the pronotum) ... *longicornis*, Blackb.
- BB. Puncturation of the interstices much less
clearly defined.
- C. Pronotum very finely punctured (scarcely less
finely than in *Lamophleus pusillus*, Schönh) *lindensis*, Blackb.
- CC. Pronotum considerably less finely punctured.
- D. Prothorax strongly transverse ... *grouvelleana*, Reitt.
- DD. Prothorax only feebly transverse ... *longicollis*, Blackb.
- M. longicornis*, sp. nov. Oblonga; sat convexa; subnitida; subtiliter fulvo pubescens; fusco-ferruginea; capite sat lato, sat fortiter minus crebre punctulato; antennis prothoracem medium excedentibus; prothorace transversim quadrato (latitudine majori parum pone apicem posita), supra ant

medium vix planato, ut caput punctulato, lateribus ante medium subsinuatis, angulis anticis obtusis posticis minute dentiformibus; elytris sat fortiter striatis, striis minus perspicue punctulatis, interstitiis planis fortiter uniseriatim punctulatis. Long., $1\frac{2}{3}$ l.; lat., $\frac{1}{2}$ l. (vix).

This species is easily recognisable by the sculpture of its elytra; the striæ are strong but scarcely visibly punctured, the interstices flat and regular without the slightest trace of striation but with a single row of closely placed very conspicuous punctures which are scarcely smaller than the punctures of the pronotum and are the only conspicuous punctures on the elytra. The antennæ are a little longer than in the other *Myrabolix* known to me, and the form of the prothorax is distinctive, the sides being slightly sinuate in front of their middle, and at the front of the sinuation the width of the prothorax being quite fully as wide as—to the eye it looks wider than, but by measurement I cannot make it so—at any other part.

Victoria.

M. longicollis, sp. nov. Oblonga; vix depressa; subnitida; subtiliter fulvo-pubescent; fusco-ferruginea; capite minus lato, crebre sat fortiter subrugulose punctulato; antennis minus elongatis; prothorace minus fortiter transverso, supra ante medium vix planato, subfortiter sat crebre nec rugulose punctulato, lateribus sat rectis, angulis anticis obtusis posticis minute vix subdentiformibus; elytris leviter punctulato-striatis, interstitiis uniseriatim subtilius punctulatis externe (certo adspectu) subtiliter vix carinatis (interstitiis 2° — 5° certo adspectu subtiliter striatis). Long., $1\frac{1}{2}$ l.; lat., $\frac{2}{3}$ l.

The elytral interstices have a peculiar structure—more or less similar to that of nearly all the other *Myrabolix* known to me—which is difficult to describe. The space between each two striæ seems to be on a slightly inclined plane so that its external edge is a trifle higher than the other edge and from a certain point of view its external edge looks very finely cariniform—this has some analogy with the structure of the interstices in many *Læmophlei*. The dorsal interstices moreover have a slight tendency to the peculiar character—well-marked in *M. parva*, Blackb., and in the species that I take to be *haroldiana*, Reitt.—of each bearing a punctulate stria running down its middle which from a certain point of view makes it appear as if there were twice as many dorsal striæ as in the species not possessing this character. Here, however, it is very slight—so slight that in tabulating the species of the genus I have disregarded it. This species differs markedly from all its congeners known to me by its very evidently narrower and less transverse prothorax.

Victoria.

M. grouvelleana, Reitt. I have a specimen of a *Myrabolia* given me by M. Grouvelle, ticketed with the name "*M. grouvelleana*," and quite satisfactorily agreeing with Reitter's generic characters—but if it is rightly named as a *species* Reitter's description is a very poor one. The head and pronotum of the specimen are decidedly strongly punctulate (the individual punctures are hardly smaller than those on the pronotum of *Carpophilus hemipterus*—though they are very much more closely and rugulose disposed than in that insect)—whereas Reitter calls the head and pronotum "subtiliter punctata." The error is I think more likely to be in Reitter's description than in Grouvelle's determination, but on account of the doubt I have abstained in describing the new species of this memoir from recording their differences from *grouvelleana*.

M. haroldiana, Reitt. Reitter calls the head and pronotum of this species also "subtiliter punctata." In assigning the name to one of the species before me (the only one of them having a dorsal impression on the front part of the pronotum, which Reitter gives as a distinctive character of *haroldiana*) I have taken the term "subtiliter punctata" as implying puncturation similar to that of the species sent by Grouvelle as *grouvelleana*, and note that it is not much different from that which in my descriptions I have called "sat fortis" or "subfortis," and I may add that in my former paper on *Myrabolia* (Tr. R.S., S.A., 1892), I applied the same qualification to Reitter's descriptions. *M. parva*, Blackb. and *lindensis*, Blackb. have considerably finer puncturation of their pronotum than in the specimen named by M. Grouvelle but in other respects they do not at all agree as species with Reitter's descriptions.

CATHARTUS (?).

The following species I refer to *Cathartus* only with hesitation, but I do not think there is any other described genus to which it can be referred and it is certainly very near to that one. I unfortunately cannot refer to the diagnosis of *Cathartus* and have to fall back on a comparison with *C. advena*, Waltl.—which I believe is the type—so that I should not be justified in forming a new genus for the present insect, which does not seem to me to differ from *C. advena* by any characters likely to be generic unless it be that the hind coxæ are somewhat less widely separated—making the ventral projection between them more triangular—and that the tarsi differ somewhat, each of the basal three joints being prolonged on the undersurface—the first feebly, the second decidedly, the third strongly—while in *C. advena* the basal joint does not appear to have any prolongment, the second only a slight one, and the third a strong one. The length of the tars

and proportions of their joints do not seem to differ materially from the same in *C. advena*. The antennæ are very similar to those of *C. advena*, though the second joint is somewhat smaller in proportion to the first and third; the genæ are acute as in *C. advena*, and the prothorax has pronounced anterior angles of the same kind as in that insect (though less strong) its form however being more narrowed hindward and the sides being finely crenulate. These particulars will no doubt enable my note to be corrected if I have overlooked any described genus to which this species ought to be referred rather than *Cathartus*; there certainly is no other genus known as Australian in which it could be placed.

C. (?) cairnsensis, sp. nov. Sat elongatus; sat angustus; breviter albido-pubescent; rufo-testaceus; capite confertim leviter subrugulose punctulato, æqualiter convexo; prothorace quam latiori vix longiori, supra ut caput punctulato, postice manifeste angustato, in dorso longitudinaliter vix planato, lateribus subsinuatis subtiliter crenulatis, angulis anticis subdentiformibus posticis sat rectis; elytris subtilissime striatis, interstitiis uniseriatim punctulatis (puncturis minus fortiter impressis). Long., 1 l.; lat., $\frac{1}{5}$ l. (vix).

The prothorax is I think very slightly longer than wide, but it is difficult to be quite sure of one's measurements with so very small an insect; to a casual glance it looks decidedly longer than wide. This species is perhaps near *C. rugosus*, Gr. (from New Guinea), but differs from the description of that insect in having its pronotum evenly punctulate, and also (judging from Grouvelle's figure) by its form somewhat narrower and more elongate with its prothorax evidently more elongate and more distinctly narrowed behind. The general character of the sculpture seems to be very similar to that of *C. rugosus*.

N. Queensland (Cairns); given to me by Mr. Koëbele.

SILVANUS.

S. brevicornis, Er. The specimen (from Tasmania) that M. Grouvelle sent me ticketed "*Myrabolia grouvelleana*, Reitt." seems to me to be undoubtedly *Silvanus brevicornis*, Er. (also from Tasmania). The insect ought therefore I think, to be called *Myrabolia brevicornis*, Er. I believe this synonymy has not been previously noted.

S. castaneus, Macl. Mr. Lea has been good enough to send me some specimens of a *Silvanus* under this name. If they are correctly named Macleay's species is not distinct from *S. unidentatus*, Fab.

S. aridulus, sp. nov. Modice angustus; sat depressus; subtiliter pubescens; piceo-brunneus, elytris pedibusque nonni-

hil dilutioribus; antennis sat brevibus sat robustis; capite sat plano minus inæquali, pone oculos dentato, supra subtilius confertim punctulato; prothorace quam latiori parum longiori, postice nec antice sat angustato, supra longitudinaliter late leviter biimpresso, confertim leviter punctulato, lateribus obtuse 6-dentatis; elytris obsolete punctulato-striatis, interstitiis 5° 7° 9° que manifeste elevatis (ceteris planis obsolete nec seriatim punctulatis). Long., $1\frac{7}{10}$ l.; lat., $\frac{1}{2}$ l.

Near *S. surinamensis*, Linn. and *congener*, Oll. but differing from both *inter alia* by the inner four interstices of each elytron being perfectly flat, and the striæ and punctures of the elytra being very feeble throughout (becoming a little stronger, however, near the lateral margin). The general form is much wider and the prothorax much less elongate than in *congener*. The size is much larger, and the prothorax is notably wider in front, than in *surinamensis*.

Central Australia (Oodnadatta).

The following table shows the distinctive characters of the *Silvani* known to be Australian:—

- | | | |
|------|------------------------------------------------------------------------------------------------------------|-----------------------------|
| A. | Elytra with the alternate (or a smaller number of the) interstices evidently more elevated than the others | |
| B. | The inner four interstices of each elytron quite flat | <i>aridulus</i> , Blackb. |
| BB. | Interstice three conspicuously elevated. | |
| C. | Sulci of pronotum very wide and shallow (size larger) | <i>congener</i> , Olliff. |
| CC. | Sulci of pronotum notably narrower and deeper (size smaller) | <i>surinamensis</i> , Linn. |
| AA. | Interstices of elytra equal (or nearly so) <i>inter se</i> . | |
| B. | Prothorax not (or scarcely) longer than wide. | |
| C. | Head dentate behind the eyes | <i>monticola</i> , Blackb. |
| CC. | Head not dentate behind the eyes. | |
| D. | Colour of body entirely black (sides of prothorax not crenulate?) | <i>atratus</i> , Gr. |
| DD. | Colour of elytra brownish-rufous (sides of prothorax strongly crenulate) | <i>armatus</i> , Blackb. |
| BB.* | Prothorax conspicuously longer than wide | <i>unidentatus</i> , Fab. |

CRYPTAMORPHA.

C. optata, Oll. This species was described on a specimen from Tasmania—a locality from which I have not seen any *Cryptamorpha*. I do not think it is identical with any of those I have described though it is perhaps near *Macleayi*, Blackb. But *inter alia* Olliff says of its head “coriaceous” implying that there is no distinct puncturation, whereas the head of *Macleayi* bears numerous not very strongly impressed isolated punctures; nor do I find that the interstices of the elytra are particularly

* *S. castaneus*, Macl., if a valid species, must be placed here.

narrow as compared with those of other *Cryptamorphæ*, as Olliff seems to imply they are in *optata*.

C. triguttata, Waterh. In the description of this species, as in that of *C. optata*, Oll., the sculpture of the head is characterised by the word "*coriaceous*" without reference to their being any distinct punctures, with which no *Cryptamorphæ* known to me agrees. Several species before me have the surface of the head more or less coriaceous, but there is in all of them a well defined system of larger punctures on the coriaceous surface. *C. triguttata* is said to have "an elongate spot on the suture of the elytra near the apex," which I cannot find in any of the specimens before me—whatever postmedian dark mark there is near the apex being always an ill-defined transverse fascia, which is more or less traceable in almost all the *Cryptamorphæ* that I have seen and is not, I think, specific—specimens where it is wanting being mere varieties. Waterhouse's species is described from S Australia—from which locality I have seen many examples of *Cryptamorphæ*—and I find it difficult to believe that I have not seen either *optata* or *triguttata*, but I am obliged to consider that such is the case.

C. peregrina, sp. nov. Sat elongata; sat angusta; sat nitida; pilis longis erectis sparsim vestita; rufo-ferruginea, in pronoti (hoc nonnihil cupreo) lateribus et in elytris indeterminate obscuriore, capite haud coriaceo, crebre fortiter punctulato, utrinque bistriato, striis sat parallelis, externa minus perspicua juxta oculum, interna integra subtili sed bene definita; prothorace vix transverso, postice sat angustato, subtilius aspere confluentem punctulato, lateribus sat æqualiter vix arcuatis denticulis setiferis circiter 6 armatis (majoribus 2 ad angulum anticum, 1 ad angulum posticum, ceteris minutis); elytris sat grosse punctulato-striatis, interstitiis planis subtiliter punctulatis. Long., $1\frac{2}{3}$ l.; lat., $\frac{2}{3}$ l.

The subnitid surface and deep close puncturation of the head associate this species with *C. Victoriae*, Blackb., and *C. delicatula*, Blackb. The former is much larger with *inter alia* its prothorax—not narrowed hindward from close to the apex, as in this species but—narrowed only close to the base and with its lateral denticulations all minute and subequal. *C. delicatula* is very close to this species but has *inter alia* a more decidedly transverse prothorax and (especially) the puncturation of its head considerably finer and closer and asperate.

N.S. Wales (Blue Mountains).

PSAMMÆCUS.

No species really attributable to this genus has hitherto been to my knowledge recorded as Australian. *Psammæzi*, however, seem to be fairly numerous in tropical Queensland. The follow-

ing four species were taken by Mr. Koebele in the Cairns district. They seem distinct from all their somewhat numerous congeners that have been described as occurring in New Guinea, &c.

P. incertior, sp. nov. Sat brevis; sat latus; testaceo-ferrugineus, antennarum articulis 9° 10° que prothorace et maculis 5 in elytris (dorsalibus magnis submedianis 2, suturali communi 1 postmediana, his anguste conjunctis, humeralibus 2) nigris vel piceis; nonnullorum exemplorum varie prothorace minus vel haud infuscato, maculis suturali humeralibusque carentibus, maculis dorsalibus minoribus, notularum colore minus determinatis; antennis corporis dimidium vix excedentibus; oculis capitis basin attingentibus; capite utrinque antice breviter minus perspicue impresso, cum pronoto grosse crebre rugulose punctulato; hoc fortiter transverso, ad basin fere ab apice angustato, lateribus leviter arcuatis denticulis setiferis circiter 8 (his parvis inter se sat æqualibus) armatis; elytris quam prothorax multo latoribus, grosse punctulato-striatis, interstitiis sat perspicue transversim rugatis; corpore pilis sat longis suberectis vestito. Long., $1\frac{1}{2}$ l.; lat., $\frac{3}{5}$ l. (vix).

An extremely variable species in respect of colouring. In some specimens the elytral dark marks are extremely similar to those of a well marked example of the European *P. bipunctatus*, Fab. The discoidal dark spot on the elytra is present in all the specimens before me, though in some it is smaller and of lighter colour than in others. In a fully marked specimen the shoulders are black, the discoidal spots are very large, the sutural spot is smaller but very dark and all the spots except the humeral ones are narrowly connected. In one specimen the three hind spots of the elytra are all present but are very small and not much darker than the general surface and are all narrowly connected as in a dark specimen.

N. Queensland (Cairns). Mr. Koebele.

P. T-notatus, sp. nov. Sat brevis; sat latus; pilis sat longis suberectis vestitus; ferrugineus, antennarum articulis 7° — 10° (vel 8° — 10°) prothoracis lateribus elytrorum basi et in his notula communi (hac partem dimidiam apicalem occupante) literam T simulante nigropiceis; antennis corporis dimidium manifeste excedentibus; oculis capitis basin vix attingentibus; capite fere æquali, fortiter sat crebre vix grosse haud rugulose punctulato; prothorace fortiter transverso, arcuatim fere ab apice ad basin sat fortiter angustato, quam caput paullo magis crebre punctulato, lateribus dentibus 5 (his ab apice retrorsum gradatim majoribus, posticis 2 magnis spini-

formibus) armatis; elytris quam prothorax multo latioribus, fortiter punctulato-striatis, interstitiis planis perspicue seriatim punctulatis. Long., $1\frac{1}{3}$ l.; lat., $\frac{2}{3}$ l.

The coloring, especially the conspicuous common T-like mark on the elytra, in combination with the comparatively large spiniform teeth on the hinder part of the lateral margin of the prothorax, makes this species easy to recognise.

N. Queensland (Cairns). Mr. Koebele.

P. epsilon, sp. nov. Sat brevis; sat latus; pilis sat longis sub-erectis vestitus; testaceus, antennarum articulis 7° — 10° et in elytris notula communi (hac partem dimidiam apicalem occupante) literam epsilon simulante nigropiceis; antennis corporis dimidium manifeste excedentibus; oculis capitis basin attingentibus; capite ut *P. T-notati*; prothorace valde transverso, arcuatim fere ab apice ad basin minus fortiter angustato, trans basin perspicue depresso, ut caput punctulato, lateribus dentibus circiter 6 (ex his anterioribus minutis posterioribus paullo majoribus) armatis; elytris quam prothorax sat latioribus, ut precedentis (*T-notati*) sculpturatis. Long., $1\frac{1}{3}$ l.; lat., $\frac{2}{3}$ l.

The whole surface of the body is testaceous except a common blackish spot on the hind half of the elytra which forms a very sharply defined and perfect representation of the Greek letter epsilon (capital). Apart from the markings this species differs from the preceding very conspicuously by its wider prothorax—less narrowed behind—having a very distinct depression across the base with the lateral projections smaller and more numerous. The eyes also seem to attain the base of the head a trifle more exactly. The part behind the head is in reality *neck* in both, but where it is visible through undue protruding of the head from the prothorax its sides converge hindward somewhat in *T-notatus* and are parallel in *epsilon*. This, however, is a slight and inconspicuous character.

N. Queensland (Cairns). Mr. Koebele.

P. vittifera, sp. nov. Minus brevis; minus latus; pilis minus elongatis vestitus; testaceo-brunneus, elytris vitta (hac ab humero ultra medium extensa) postice intus dilatata et sutura in parte apicali tertia piceis ornatis, antennarum (exempli typici) articulis apicalibus carentibus; oculis capitis basin attingentibus; capite sat æquali crebre fortiter punctulato; prothorace sat transverso, arcuatim fere ab apice ad basin sat fortiter angustato, confertim subfortiter subrugulose punctulato, lateribus denticulis setiferis circiter 8 minutis (his inter se sat æqualibus) armatis; elytris quam prothorax sat latioribus, ut *P. T-notati* sculpturatis. Long., $1\frac{2}{3}$ l.; lat., $\frac{1}{2}$ l.

I have seen only a single specimen—which has unfortunately lost the greater part of its antennæ—of this species, but as it is very distinct from any other *Psammococcus* that I can ascertain to have been described, I have no hesitation in naming it. The markings of its elytra are of quite a different type from those of the preceding three species, and the structure of its prothorax is very distinct. The lateral denticulations of that segment are somewhat like those of *P. incertior* (though more minute—one or two of them a trifle larger than the rest—especially the hindmost), but its surface is very much more closely and less coarsely punctulate. From the other two species described above the very different inequalities of the sides of its prothorax *inter alia* separate it very widely.

N. Queensland (Cairns). Mr. Koebele.

CRYPTOPHAGIDÆ.

CRYPTOPHAGUS.

C. nigro-apicalis, sp. nov. Brevis; sat parallelus; modice convexus; pubescens; ferrugineus, prothorace infuscato, elytris apicem versus nigricantibus; antennis minus robustis, articulis 9° 10° que fortiter transversis (hoc quam ille nonnihil longiori nonnihil latiori); capite pronotoque crebre fortiter subrugulose punctulatis; hoc fortiter transverso, ante scutellum utrinque impresso, lateribus ad angulum anticum extrorsum dilatatis hinc ad basin rectis; elytris fortiter sparsius punctulatis. Long., $\frac{4}{5}$ l.; lat., $\frac{1}{10}$ l.

I have only a single specimen of this insect and therefore cannot state positively that its male has heteromerous tarsi, but in other respects and in facies it seems to agree with *Cryptophagus*. Victoria.

DIPHYLLUS.

It is interesting to find this genus in Australia. The species described below is evidently a member of it.

D. ornatellus, sp. nov. Ovalis; sat nitidus; pube sat longa erecta vestitus; piceo-brunneus, antennis pedibus elytris que livide testaceo-brunneis, his nigro-piceo-variegatis; capite sat æquali fortiter sat crebre punctulato; antennis minus robustis modice elongatis, clava bi-articulata (hujus articulo basali quam alter paulo latiori); prothorace fortiter transverso, antice paulo angustato, supra fere ut caput punctulato, utrinque carina integra submarginali instructo, lateribus minus arcuatis, angulis anticis sat prominentibus posticis sat rectis; elytris obsolete striatis, striis fortiter punctulatis, interstitiis confertim subtilissime punctulatis. Long., 1 l.; lat., $\frac{1}{2}$ l. (vix).

The dark markings on the elytra are moderately sharply defined and probably variable. In the type they consist of (a) a common mark on the hinder half roughly resembling the letter T, (b) a transversely quadrate blotch just touching the upper extremity of each arm of the T and reaching the lateral margin, (c) a sublateral blotch similar to (b) which from each extremity emits a narrow branch connecting with the corresponding extremities of (b). Compared with the European *D. lunatus*, Fab., this species is much smaller, with the antennæ a little longer and less stout, the surface evidently more nitid, the sculpture not much differing but with the sublateral carina of the pronotum a little nearer to the lateral margin and the rows of punctures on the elytra placed in shallower striæ, and the colors and markings very different.

Victoria (under bark of *Eucalyptus*; Dividing Range).

DIPLOCÆLUS.

D. (Triphyllus) fasciatus, Macl. Mr. Lea has been good enough to send me an example of this insect compared with the type. It agrees well with the description and is certainly a *Diplocælus*. This correction has not to my knowledge been previously noted definitely, although Mr. Lea in one of his papers mentions *D. fasciatus*—without an author's name—and thereby probably indicates his knowledge that Macleay's species is a *Diplocælus*.

D. ovatus, Macl., *piliger*, Reitt., and *punctatus*, Lea, must be extremely close *inter se* and are probably identical. Macleay's is the earliest of the names. Reitter says that he has not seen Macleay's description, and Lea does not refer to either *ovatus* or *piliger*. They all describe a species notable for its long erect pubescence and strongly punctulate-striate elytra. I cannot find anything in the descriptions inconsistent with their being all one species, although if that be the case Macleay described a very small specimen—yet not indicative of much greater variation in size than I find in *D. angustulus*, Blackb. Reitter thinks that the name "*ovatus*" is inconsistent with identity with his species, which is "*ovalis*" in form—but on referring to the description I find that Macleay gives the form as "*oval*" in spite of the name. These insects—whatever number of species they represent—all differ from the other described Australian *Diplocæli* as follows:—from *fasciatus*, Macl., by their unicolorous elytra; from *Leai*, Blackb., by their very much smaller size; from *angustulus*, Blackb., by their much less narrow and less parallel form; and from *exiguus*, Blackb., and the new species described below by their much stronger elytral sculpture and longer pubescence. Mr. Lea has kindly given me a specimen of his *D. punctatus*; the other two—if they are distinct from it—I have not seen.

D. opacior, sp. nov. Sat longe ovalis; pube sat brevi erecta vestitus; ferrugineus; prothorace transversim subquadrato, sat nitido, sparsim inæqualiter leviter punctulato, supra inæquali, utrinque intra marginem sat fortiter bicostato; elytris subopacis, subtiliter striatis, striis subtiliter leviter (ultra medium vix manifeste) punctulatis, interstitiis planis coriaceis; segmento ventrali basali in medio oblique bistriato; antennarum clavæ articulo basali quam 2^{us} paullo angustiori. Long., 1 l.; lat., $\frac{2}{3}$ l. (vix).

Of described Australian *Diplocæli* this species is nearest to *D. exiguus*, Blackb. which it resembles in colour size and outline, differing, however, *inter alia* in the uneven surface of its pronotum, in the shallower and much less regular puncturation of the same, and in the much feebler sculpture of the elytra, on which the seriate punctures are fine and faintly impressed even in the front part and become very much more so from a little behind the middle. The inequalities of the pronotum consist of a shallow ill-defined concavity (not much more than a flattening) on the hinder two-thirds of the disc, and a large better-defined round fovea on either side of the concave space and a little in front of the base.

Victoria (Glenelg R.); under bark of Eucalyptus.

TABULATION OF THE DESCRIBED AUSTRALIAN DIPLOCÆLI.

A. Size very large ($3\frac{1}{2}$ l.)	...	...	...	<i>Leai</i> , Blackb.
AA. Size much smaller.				
B. Elytra bicolorous	...	...	...	<i>fasciatus</i> , Macl.
BB. Elytra unicolorous.				
*C. Form broader than in the other described species	...	...	...	<i>latus</i> , Lea
CC. Form very narrow and elongate (not unlike that of <i>Lyctus brunneus</i> , Steph.)	...	...	...	<i>angustulus</i> , Blackb.
CCC. Form oval				
D. Upper surface clothed with long erect pubescence; elytra very strongly punctulate	...	...	...	<i>ovatus</i> , Macl. <i>piliger</i> , Reitt. <i>punctatus</i> , Lea.
DD. Pubescence much shorter; punctures of elytra much feebler				
E. Surface of pronotum even	...	...	...	<i>exiguus</i> , Blackb.
EE. Surface of pronotum very uneven	...	...	...	<i>opacior</i> , Blackb.

TELMATOPHILUS.

T. sublautus, sp. nov. Elongato-ovatus; modice convexus; nitidus; setis subtilissimis parum manifestis sparsim vestitus; rufo-testaceus, antennarum articulis 9° 10° que et in elytris notulis indeterminatis 3 (his basali, mediana et antepicali) picescentibus; capite convexo sat æquali sparsissime fortiter punctulato; prothorace transverso, antice quam trans basin sat angustiori, ad basin late sublobato, ante basin

*This character is inferred from Mr. Lea's description; I have not to my knowledge seen the insect.

transversim sulcato et utrinque foveolato, sparsim fortiter punctulato, lateribus ab angulis anticis ad medium divergentibus (hic angulatis, hinc ad basin subsinuatim convergentibus), angulis anticis obtusis posticis sat rectis; elytris vix striatis, seriatim punctulatis, puncturis suturam versus modicis (extrorsus gradatim magis grossis), interstitiis lævibus; antennis quam corporis dimidium paullo brevioribus, articulis basali suborbiculari 2° brevi 3° quam 2^{us} angustiori fere duplo longiori 4°—8° brevibus 9° 10° que transversis sat magnis 11° obovato quam 10° paullo longiori; prosterno inter coxas minus lato, utrinque brevissime elevato; metasterno ad latera grosse sparsim punctulato; tarsis sat elongatis. Long., 1½ l.; lat., ½ l.

This species is clearly congeneric with *T. Sharpi*, Blackb., which Dr. Sharp considered congeneric with his *Telmatophilus nitens*—from New Zealand. The only structural differences that I notice are the tarsi somewhat longer and more slender and the prosternum a little narrower between the coxæ. The infuscation of the elytra is diffused about the base and forms a vague fascia at the middle—much dilated on the lateral margin—and a dark cloud filling the apex. It is probable, however, that the markings are more or less variable; in the type they have a somewhat washed-out appearance. The eyes are a little less coarsely granulate than in *T. Sharpi*.

Victoria.

DERMESTIDÆ.

This family is very numerous represented in Australia, chiefly by very small species. It seems desirable, as some of the species that have been attributed to the older genera cannot be regarded as typical members of the same, to preface the following notes with a tabulated statement of the characters that I have regarded as governing the apportionment of the species to the various genera.

A.	No ocellus on the forehead	...	...	...	<i>Dermestes</i>
AA.	An ocellus on the forehead.				
B.	The mesosternum narrow	...	...	...	<i>Megatomæ</i>
BB.	The mesosternum wide, emarginate in front.				
C.	Femora and tibiæ strongly compressed				
D.	Basal joint of tarsi very short	...	...	...	<i>Brachysphyrus</i>
DD.	Basal joint of tarsi much longer than second joint	...	...	...	<i>Adelaidæa</i> .
CC.	Femora and tibiæ normal.				
D.	Vestiture consisting of hairs				
E.	Sternal cavities lateral, sulciform	...	...	...	<i>Trogoderma</i>
EE.	Sternal cavities anterior, foveiform (antennal club 2-jointed)	...	...	...	<i>Cryptorhopalum</i> (1st section)
EEE.	Sternal cavities anterior, transversely sulciform (antennal club with more than 2 joints)	...	...	...	<i>Cryptorhopalum</i> (2nd section)
DD.	Vestiture consisting of scales	...	...	...	<i>Anthrenus</i>

DERMESTES.

D. australis, Macl. Judged by the description this name may be confidently regarded as a synonym of the introduced *D. vulpinus*, Fabr. There seems to be no sufficient evidence of the occurrence of *Dermestes* in Australia except by accidental importation. I am not aware of this synonymy having been previously reported.

BRACHYSPHYRUS (gen. nov.).

Caput oculo instructum; palpi maxillares subcylindrici, articulo apicali quam præcedens sat longiori; antennæ breves, 11-articulatæ, articulis 1^o 2^o que subglobosis quam sequentes multo majoribus 3^o—8^o minutis 9^o—11^o (exempli typici) clavam formantibus (hac quam articuli ceteri conjuncti vix breviori, articulis 9^o 10^o que fortiter transversis, 11^o quam 9^{ns} 10^{ns} que conjuncti vix breviori); oculi modici ovales; prothorax antice angustatus, postice lobatus; elytra postice singulatim rotundata, pygidium haud tegentia; prosternum medium carina longitudinali integra instructum, utrinque longe intra marginem lateralem fovea sat magna impressum; mesosternum latum antice processum prosternalem recipiens; femora lata subtus sulcata; tibiæ compressæ latæ extus spinulis parvis validis ciliatæ; tarsi modici, articulo basali minuto quam 2^{ns} multo breviori; coxæ anticæ permagnæ, prosterni marginem anteriorem fere attingentes; corpus pubescens.

The very large front coxæ, the position of the prosternal impressions (widely separated from the lateral margins of the segment), the very wide femora and tibiæ and the very small basal joints, are all unusual characters in the *Dermestidæ*. The narrow subcariniform interspace between the front coxæ is of similar structure to the same part in *Trogoderma*, &c., but the coxæ themselves nearly reaching the front margin of the segment, it also is similarly prolonged.

B. irroratus, sp. nov. Latissimus, fere subcircularis; subnitidus; nigro-piceus pube subtili minus perspicua fulva vestitus et maculis numerosis (his e pilis longioribus niveis formatis) irroratus, antennis pedibusque ferrugineis; supra crebre subtilius punctulatus; subtus pilis sat longis castaneis crebre vestitus. Long, $1\frac{1}{2}$ l.; lat., 1 l.

The structural characters have been so fully specified above in the diagnosis of the genus that it seems unnecessary to repeat them here.

N. Queensland; Cairns (given to me by Mr. Koebele).

MEGATOMA.

I have before me an example from N. Queensland which must be referred to this genus. It is undoubtedly very close to *M. tenuifasciata*, Reitt., which appears to be the only Australian *Megatoma* hitherto described. The only objection I find to its identity with Reitter's species consists in its narrow elytral fascia being of zig-zag form, whereas Reitter calls it "Subrecta." This points to the probability of its being a distinct species—a probability increased by the remoteness from Queensland of Tasmania (Reitter's locality). Unfortunately my specimen is not in sufficiently good condition for me to be able to describe it satisfactorily.

TROGODERMA.

To a casual glance most of the Australian species of this genus appear scarcely distinguishable *inter se*, but a careful examination of their structure shows them to possess particularly satisfactory differential characters—chiefly in the antennæ and the prosternal sulci. I have found the latter to be the organs on which it is most convenient to base the primary divisions of the genus. These sulci are cavities for the reception of the antennæ in repose and always run the whole length of the prosternum immediately within its lateral margin on either side. Consequently the variations in the form of the sulci result from the nature of their *inner* and *hind* margins. In what seems to me the most highly developed form the sulci are very deep and narrow, the inner margin strongly defined and running obliquely from close to the inner margin of the eye to the hind angle of the prosternum where it meets the outer wall of the sulcus and closes its cavity. *T. Adelaide*, Blackb., and *varipes*, Blackb., furnish typical instances of the above form of sulcus. The development of the sulci however degenerates by their becoming wider, shallower, and less sharply limited. In some species (e.g. *apicipenne*, Reitter) the form of the sulci differs from that of the *Adelaide* group by their inner margin being in its front half nearly parallel to their outer margin and in its hind half (only) running obliquely across to join the outer margin at the hind angle of the prosternum. In other species, again (e.g. *difficile*, Blackb., and *lindense*, Blackb.), the inner margin of the sulcus reaches the basal margin of the prosternum at a point between the middle of the prosternum and the hind angle of the segment, the *basal margin* closing the sulcus by being slightly elevated, and finally there are species (e.g. *morio* and *maurulum*, Blackb.) in which the hind margin of the prosternum is not at all elevated, and consequently the hind end of the sulcus is open.

In my former notices of *Trogoderma* I have apportioned the species into primary divisions according as the sulci are open or

closed behind—calling all those sulci which are closed behind “sharply defined, deep,” &c., without specifying more exact particulars. The study of more specimens and species has led me to the conclusion that such a classification is not satisfactory as it places in the first division one species (*lindense*) whose prosternal sulci are really more like those of the second division (because—and I think the observation was correct—its sulci are finely closed along their hind margin). This character however, it is very difficult to be certain about unless a specimen is available for dissection, and therefore I now regard the species as grouped according to whether the inner margin of the sulcus ends on the hind margin of the prosternum at a distance from the hind end of the outer margin or ends *in contact with* the outer margin. This renders it necessary to remove *lindense* from the first to the second group.

I observe, in all the Australian *Trogodermata* that I have examined, that the basal ventral segment has an oblique stria on either side not unlike those which are found in *Diplocelus*. I do not find this character referred to in any diagnosis that I possess of *Trogoderma*, and am not able to say whether it is present in *Trogodermata* from other countries than Australia.

TABULATION OF THE AUSTRALIAN TROGODERMATA.

A. Elytra covering the hind body—not separately rounded at the apex.

B. The inner margin of the prosternal sulci ends in contact with the outer margin.

C. Elytra with erect comparatively long pilosity.

D. Elytra with an antemedian red fascia ... *Froggatti*, Blackb.

DD. Elytra with a red humeral spot ... *Reitteri*, Blackb.

DDD. Elytra without defined antemedian red markings.

E. General colour of elytra red.

F. Antennal club of male eight-jointed and strongly pectinate ... *Macleayi*, Blackb.

FF. Antennal club of male six-jointed and strongly serrate ... *tolarnense*, Blackb.

EE. General colour of elytra black or dark piceous.

F. Club of antennæ serrate (possibly pectinate in the unknown males).

G. Club of antennæ of dark colour.

H. First joint of antennal club in female very small and very strongly transverse ... *alpicola*, Blackb.

HH. First joint of antennal club in female notably larger and less transverse ...

GG. Antennæ entirely testaceous ... *apicipennis*, Reitt.

*FF. Club of antennæ not serrate.

G. Stipes of antennæ testaceous.

H. Puncturation of disc of pronotum comparatively sparse.

baldiense, Blackb.

- I. Joints 9 and 10 of antennæ scarcely transverse in male (female unknown) ... *eyrense*, Blackb.
- II. Joints 9 and 10 of antennæ strongly transverse in both sexes ... *debilius*, Blackb.
- HH. Puncturation of disc of pronotum very close ... *Adelaida*, Blackb.
- GG. Antennæ entirely black ... *varipes*, Blackb.
- CC. Elytra devoid of erect pilosity ... *exsul*, Blackb.
- BB. The inner margin of the prosternal sulci ends on the hind margin of the prosternum.
- C. Elytra with a clearly defined testaceous antemedian fascia ... *longius*, Blackb.
- CC. Elytra devoid of antemedian markings.
- D. Antennæ and legs testaceous.
- E. Form normally wide and oval.
- F. Pronotum comparatively widely margined (size large)... *yorkense*, Blackb.
- FF. Pronotum very narrowly margined (size very small) ... *lindense*, Blackb.
- EE. Form extremely narrow and elongate . *singulare*, Blackb.
- DD. Antennæ with at least the club dark.
- E. Puncturation of disc of pronotum extremely sparse ... *difficile*, Blackb.
- EE. Puncturation of disc of pronotum close.
- F. Puncturation of elytra extremely close (almost confluent) ... *Meyricki*, Blackb.
- FF. Puncturation of elytra much less close.
- G. Antennal club of male eight-jointed.
- H. Antennal club of female six-jointed ... *maurulum*, Blackb.
- HH. Antennal club of female five-jointed ... *morio*, Er.
- GG. Antennal club of male seven-jointed *antipodum*, Blackb.
- AA. Elytra separately rounded, not covering hind body ... *occidentale*, Blackb.

T. tolarnense, sp. nov. Sat latum; sat parallelum; modice nitidum; supra pilis brevibus erectis vestitum; nigrum, elytris (his fusco-adumbratis) antennis pedibusque rufis; prothorace fortiter transverso, antice angustato, supra subfortiter sat crebre punctulato, angulis posticis retrorsum directis haud acutis; elytris sat crebre fortius punctulatis; metasterno antice lato subtruncato, prosterni sulcis latis profundis bene determinatis postice leviter clausis.

Maris antennarum clava 6-articulata, fortiter serrata. Long., 2 l.; lat., 1 l. (vix).

The red-brown elytra clouded with fuscous together with the entirely (except the basal joint) rufo-testaceous colour of the antennæ and their very strongly serrate six-jointed club render

*The male of *T. exsul*, Blackb., is not known but I feel sure that the club of its antennæ is not serrate.

the male of this insect—of which I have not seen the female—very distinct. The great width of its prosternal sulci and its serrate antennæ associate it with *T. Macleayi*, Blackb., which differs from it *inter alia* by the club of its antennæ in the male being—not merely serrate but—strongly pectinate, and eight-jointed.

N.S. Wales; Tolarno. Sent to me by Miss Carnie.

T. exsul, sp. nov. Late ovale; sat nitidum; supra pube subtili fulva depressa vestitum; nigrum, elytris versus apicem antennis (clava excepta) pedibusque rufo-testaceis; prothorace fortiter transverso, antice angustato, supra sat crebre minus subtiliter nec profunde punctulato, angulis posticis retrorsum leviter directis haud acutis; elytris crebre subfortiter punctulatis; metasterno antice lato, late rotundato; prosterni sulcis profundis, bene determinatis, postice clausis.

Feminae antennarum clava 3-articulata. Long., 1 l.; lat., $\frac{1}{2}$ l. (vix).

Although I have not been able to examine the male of this species, I have no hesitation in describing it, inasmuch as its vestiture—fine depressed fulvous pubescence—renders it extremely distinct among the Australian *Trogodermata*.

Central Australia.

T. debilius, sp. nov. Sat late ovale; sat nitidum; supra pilis brevibus erectis vestitum; nigrum, palpis tarsis et antennarum stipite testaceis, harum clava picescenti, elytris postice nonnihil rufescentibus; antennarum articulis 8° — 10° sat transversis; prothorace valde transverso, antice angustato, supra sat leviter minus crebre punctulato, angulis posticis retrorsum directis sat acutis; elytris crebre sat fortiter punctulatis; metasterno antice lato, inter coxas intermedias late rotundato; prosterni sulcis profundis, bene determinatis, postice clausis.

Maris antennarum clava 5-articulata, articulis 8° — 10° sat transversis nec quam longioribus duplo latioribus.

Feminae antennarum clava 5-articulata quam maris multo breviori (præsertim articulo ultimo), articulis 8° — 10° quam longioribus fere duplo latioribus. Long., $1\frac{3}{4}$ l.; lat., $\frac{1}{2}$ l.

The club of the antennæ in the male is very evidently longer than all the other joints together, in the female a little shorter than the other joints together. Among the species resembling this one in the form of their prosternal sulci and in their antennal club being black or nearly so in contrast with the testaceous stipes (which seems to be a perfectly reliable specific character) it is distinguished by the joints 8—10 of its antennæ being not so

excessively transverse as in *alpicola*, Blackb.; by its pronotum very evidently more feebly and sparsely punctulate than in *Adelaidæ*, Blackb., and by its size notably smaller, its form very much less parallel, its tibiæ and antennal club much more deeply black in colour and its elytra much less extensively rufescent towards the apex than in *eyrense*, Blackb.

W. Australia; Champion Bay (from Mr. E. Meyrick).

T. longius, sp. nov. Elongato-ovale; sat nitidum; supra pilis erectis vestitum; nigrum, elytris fasciis 2 testaceis (altera antemediana angulata, altera subapicali obliqua) ornatis, antennis (clava vix infuscata excepta) testaceis, pedibus plus minusve rufescentibus; prothorace fortiter transverso, antice angustato, in disco sparsissime (latera versus magis crebre) subtilius punctulato, angulis posticis retrorsum modice productis acutis; elytris leviter sat crebre minus subtiliter punctulatis; metasterno antice sat lato late rotundato; prosterni sulcis latis, modice profundis, male determinatis, postice apertis.

Feminae (?) antennarum clava angusta, 4 articulata. Long, 1 l.; lat., $\frac{1}{2}$ l. (vix).

This species is a very distinct one. It is the only *Trogoderma* known to me having a well defined coloured pattern on the elytra in combination with prosternal sulci open behind. The pilosity on the testaceous parts of the elytra is of testaceous colour, and there is also some thin whitish pilosity on the pronotum.

Victoria (Glenelg R.) and Tasmania.

T. lindense, Blackb. See notes on this species in the general remarks (above) on *Trogoderma*.

T. maurulum, sp. nov. Sat elongatum; sat nitidum; supra pilis brevibus erectis vestitum; nigrum, palpis tarsis et antennarum stipite testaceis; antennarum articulis 8°—10° valde transversis, quam longioribus duplo latioribus; prothorace fortiter transverso, antice angustato, supra crebre subfortiter punctulato, angulis posticis retrorsum directis sat acutis; elytris minus crebre sat fortiter punctulatis; metasterno antice minus lato, inter coxas intermediatis angulato; prosterni sulcis male determinatis, postice apertis.

Maris antennarum clava 8-articulata; feminae 6-articulata. Long., $1\frac{2}{3}$ l.; lat., $\frac{2}{3}$ l. (vix).

In some examples the tibiæ are piceous rather than black, and the knees even rufescent. The most distinctive character of this species and the next is the eight-jointed antennal club of the male. To a casual glance the antennæ seem to be all club, but on close examination it is seen that there is a single very small

testaceous joint—forming what I have called the *stipes*—between the two normally large basal joints—which may be said to form the scape of the antenna, the second of which is of testaceous colour—and the club. In the female the dilated joints (of black colour) forming the club begin with the sixth joint and the *stipes* consists of three testaceous joints—the second joint of the antennæ being also testaceous as in the male.

Victoria; Glenelg R. district.

T. (Megatoma) morio, Er. Reitter discusses this species in Verh. Ver. Brünn. (1881, p. 36) and is disposed to identify it with a *Trogoderma* that he had examined, and which he said agreed very well with Erickson's description except in being somewhat smaller than the size given for the type. As Erickson does not supply information regarding the structural characters of his species, his description would fit several species that are before me, but I have little doubt that one or other of them is *morio*; and as one of them is from Tasmania (Erickson's locality) I have no hesitation in fixing upon it to bear the name. It is extremely close to *T. maurulum*, Blackb., differing chiefly in the antennal character of the female. In the female of *maurulum* joints 2—5 are testaceous, 3 very evidently longer than 4, 4 a trifle longer than 5, 3—5 form the *stipes*, 6—11 are black and form the club. In *morio* joints 2—6 are testaceous, 3 if anything shorter than 4, 4 and 5 successively slightly shorter, 3—6 form the *stipes*, 7—11 are (not black but) reddish piceous and form the club. *T. morio* is a little narrower than *maurulum* with its sides straighter and more parallel.

THAUMAGLOSSA.

One species (*concaivfrons*, Reitt.) has been doubtfully attributed by its author to Tasmania. He says of it "vaterland fraglich" and then suggests that it may be Tasmanian. It is an insect of black colour with some parts—including the head—red, the forehead deeply concave, and is unknown to me. The genus however occurs in Australia undoubtedly as a *Dermestid* now before me—from Queensland and N.S. Wales, and which agrees well with the description of *Anthrenus nigricans*, Macl.—is a member of it. Its ten-jointed antennæ in combination with cylindrical tibiæ, elongate basal joint of the tarsi, toothed claws, and elytra separately rounded at the apex render it easy to identify. There is a very strong oblique stria on either side of the median part of the basal ventral segment.

CRYPTORHOPALUM.

The Australian *Dermestidæ* that have been attributed to this genus appear to me to represent two distinct genera. Reitter's descriptions of the three species that he attributed to the genus

unfortunately contain no information regarding the structure of the antennæ and of the prosternal sulci, without which it is impossible to identify with certainty the insects on which his descriptions were founded. I have before me, however, three species—from the localities cited in his memoir—which agree so well with his very full account of superficial characters that I regard their determination as not far short of certain. They, however, are decidedly not typical *Cryptorhopala*. Reitter says in a note that two of his species are superficially more like *Trogoderma* but he adds that their antennæ and antennal furrows are accordant with *Cryptorhopalum*. This seems unfavorable for my identification but does not change my opinion. The specimens that I identify with the two species referred to—*variabile*, Reitt., and *Erichsoni*, Reitt.—are of *Trogoderma* facies but their antennæ and antennal furrows are not those of typical species of either *Trogoderma* or *Cryptorhopalum*, but are like those of *Anthrenus*—i.e. the antennæ have their club less compact and more elongate than in *Cryptorhopalum*, and are received in sharply cut furrows placed transversely along the front margin of the prosternum. I am therefore of opinion that Reitter was incorrect in his observation of the antennal characters of these insects. I have no doubt that Reitter's three species belong to a genus not yet recorded—at any rate as Australian—but inasmuch as I am not sure that the genus may not have been described on examples from some other country—and many *Dermestid* genera are of extremely wide distribution—I do not propose a new name for it, but shall treat it for the present as a section of *Cryptorhopalum*. The Australian species of the genus hitherto described whose antennæ and prosternal sulci are typical are *australicum*, Blackb., *Woodvillense*, Blackb., *Quornense*, Blackb., and *interioris*, Blackb.; those having the antennæ and antennal furrows *Anthrenus*-like are *confertum*, Reitt., *variabile*, Reitt., and *australis* (*Anthrenus*), Hope. Beside the above there remains *C. obscurum*, MacL., on the description of which it is impossible to found any judgment; Macleay himself, however, expresses the opinion that the insect is not a true *Cryptorhopalum* and it is perhaps safe to assume that opinion to be correct. *C. Erichsoni*, Reitt., appears to be a synonym of *C. (Anthrenus) australe*, Hope.

I cannot find any conspicuous external characters distinguishing the sexes of the species of *Cryptorhopalum*. In the species of which I have seen numerous specimens, however, some are a little more elongate in form and have slightly more sparse puncturation than others; these I regard as males. Reitter does not refer to the sexual characters of his species beyond the remark in the description of *C. confertum* (which he describes as "subopacum")

that the prothorax of the female is "subnitidus." The sexual differences in the antennal club seem to be very slight; I specified what I took to be such a distinction in describing *C. (?) (Anthrenus) Flindersi* (= *confertum*, Reitt.), but really these differences are so small that they are hardly worth specifying especially as the antennæ are not easily examined satisfactorily unless they have been placed in position immediately after the death of the specimen. It might be supposed that among the *Cryptorhopala* which I have called the first section of the genus those with the club of their antennæ small were likely to be the females of those having large antennal clubs, but there are too many other differences among those before me for that to be the case, unless I have only one sex of each species; i.e., males of some species and females of others—which is not likely.

As the described species of *Cryptorhopalum* are now somewhat numerous a tabular statement of their distinctive characters seems to be called for. In providing it I have divided the species into two sections—the first containing species that seem to be typical members of the genus—the second containing the species referred to above as having antennæ and sternal cavities like those of *Anthrenus*.

It should be noted that abraded specimens are scarcely capable of being identified confidently unless in the case of a few species with well marked elytral pattern of colours. I have before me specimens from W. Australia (at least two species) and from Victoria which on account of their being more or less abraded I have not ventured to describe.

TABULATION OF SPECIES OF CRYPTORHOPALUM.

Section I. — True *Cryptorhopala*, with two-jointed antennal club.

- A. Antennal club large and circular.
 - B. Elytra bicolorous, independently of the pubescence.
 - C. Elytra traversed by a zone of blackish pilosity.
 - D. Puncturation of elytra crowded and asperate *woodvillense*, Blackb.
 - DD. Puncturation of elytra notably sparser and smoother *australicum*, Blackb.
 - CC. Elytral pilosity entirely of pale colour *Eucalypti*, Blackb.
 - BB. Elytra unicolorous, independently of the pubescence *quornense*, Blackb.
 - AA. Antennal club much smaller, and of oval or piriform shape.
 - B. Puncturation of elytra considerably less close than in the following species ... *Casuarinae*, Blackb.
 - BB. Puncturation of elytra much closer.
 - C. Puncturation of disc of pronotum scarcely less close and strong than of elytra *nealense*, Blackb.
 - CC. Puncturation of disc of pronotum not at all as in C.

- D. Puncturation of elytra asperate (colour of elytra almost uniformly castaneous) *ceciliense*, Blackb.
 DD. Puncturation of elytra smooth (elytra black, with red markings) *interioris*, Blackb.

Section II.—Aberrant *Cryptorhopala*, antennal club with more than two joints.

- A. The ashy pilosity of elytra in only two zones (antemedian fascia and basal spots) ... *confertum*, Reitt.
 AA. The ashy pilosity in five zones (three fasciæ and basal and apical spots).
 B. Elytra black *australe*, Hope.
 BB. Elytra castaneous *variabile*, Reitt.
 AAA. The ashy pilosity in four zones ... *quadrifasciatum*, Blackb.
 AAAA. The ashy pilosity in three zones .. *terzonatum*, Blackb.

C. (anthrenus) australe, Hope. I have referred above to the probable identity of *C. Erichsoni*, Reitt., with this species, but as Hope's description is of very little value it seems necessary to state the reasons for my opinion, as follows: I have before me examples from Adelaide—Hope's locality—which are certainly conspecific with examples of a *Cryptorhopalum* (Section II.) from Melbourne—Reitter's locality. These agree perfectly with Reitter's description of *Erichsoni*—though not so well (as noted above) with his subsequent note on the antennæ—and I have little doubt of their being that insect. Reitter describes quite satisfactorily the three fasciæ and basal and apical spots of whitish pilosity on the elytra and the spots on the pronotum—the latter distinct only in a very fresh specimen. Hope's description consists of only 17 words and as far as it goes perfectly describes specimens of the insect before me—both from Adelaide and Melbourne—which are not very fresh, but have lost some of the smaller patches of pilosity, mentioning the three fasciæ on the elytra and the lateral spots on the pronotum, but passing over the small pilose spots on the middle of the pronotum and the base and apex of the elytra. This may well have been either because Hope's type was somewhat abraded or in accordance with his evident custom of attaining brevity by limiting his description to the mention of a few leading particulars.

C. Casuarinæ, sp. nov. Elongato-ovale; sat nitidum; supra pilis cinereis vestitum; piceum, elytris castaneis utroque maculis 2 infuscatis (his longitudinaliter positis) indeterminatis ornato, antennis pedibusque rufotestaceis; prothorace fortiter transverso, antice angustato, supra subtilius sat crebre punctulato, angulis posticis (superne visis) retrorsum directis sat acutis; elytris minus crebre minus subtiliter punctulatis; prosterni sulcis ovalibus, ad latera positis; antennis sat abrupte clavatis, clava 2-articulata, articulo ultimo quam penultimus haud multo majori. Long., $1\frac{1}{2}$ l.; lat., $\frac{1}{2}$ l.

The antennæ and their sulci in this species do not correspond satisfactorily with those of any other *Dermestid* known to me but they appear to be only a modification of those of typical *Cryptorhopala*. The club is two jointed, but it is very small for a *Cryptorhopalum* and is evidently longer than wide, the apical joint scarcely wider and not much longer than the penultimate. The sternal foveæ are as in other *Cryptorhopala* cavities to receive the club rather than the whole antennæ and are (not circular but) oval and placed further back than usual. The form of the body is very narrow and elongate for a *Cryptorhopalum*. The elytra are of a pale castaneous colour, each with two large faintly defined spots (darker than the general color) on the disc—one slightly behind the base, the other about the middle. In one example the elytra are very evidently (though not very much) less sparsely punctulate than in the type. I suspect it is the female, and the type a male.

Central Australia, on flowers of the Desert Oak (*Casuarina*).

C. ceciliense, sp. nov. Ovale; sat nitidum; supra pilis cinereis vestitum; rufo-ferrugineum, capite et in elytris notulis 2 indeterminatis piceis, antennis (harum clava vix infuscata) pedibusque testaceis; antennis abrupte clavatis clava 2-articulata ovali (articulo apicali quam penultimus manifeste latiori sat longiori); prothorace fortiter transverso, antice angustato, supra subtiliter minus crebre punctulato, angulis posticis (superne visis) retrorsum directis sat acutis; elytris confertim subtilius subaspere punctulatis; prosterni sulcis ovalibus. Long., 1 l.; lat., $\frac{1}{2}$ l. (vix).

The colors and markings of this species are much like those of the preceding (*casuarinæ*) except that the prothorax is rufous. The club of the antennæ is much larger (though still small for a *Cryptorhopalum*), with the apical joint considerably more notably larger than the preceding joint. The pronotum is more finely and the elytra are very much more closely punctured. The form of the body is much less narrow and much more oval. I cannot regard these differences as sexual. If they were so the larger antennæ would probably indicate the male, but the form and puncturation accompanying the larger antennæ would be much more likely to belong to the female.

Central Australia (Cecilia Creek).

C. nealense, sp. nov. Ovale; sat nitidum; supra pilis cinereis vestitum; piceo-nigrum, elytris obscure rufescentibus fasciis 2 latis piceo-nigris (altera ad basin, altera vix pone medium, positis) ornatis, antennarum stipite tibiis tarsisque sordide testaceis; antennis abrupte clavatis, clava 2-articulata ovali (articulo apicali quam penultimus parum latiori multo

longiori); prothorace fortiter transverso, antice angustato, supra crebre subfortiter (fere ut elytra) punctulato, angulis posticis retrorsum leviter directis modice acutis; elytris crebre subfortiter punctulatis; prosterni sulcis ovalibus. Long., $1\frac{1}{3}$ l.; lat., $\frac{2}{3}$ l.

The most apparent character of this species is the strong puncturation of its pronotum, which is almost identical in character with that of the elytra. The club of the antennæ is still larger than that of *C. ceciliense* being of about average size among the Australian *Cryptorhopala* but it still retains the oval form as in the preceding two species. The stipes of the antennæ is stouter than in the preceding two species, with its apical joint more evidently dilated but not nearly sufficiently so to be recognised as a part of the club.

Central Australia (Neale River).

C. Eucalypti, sp. nov. Late ovale; sat nitidum; supra pilis cinereis vestitum; nigrum, elytris (parte basali fere tertia excepta) rufis pone medium obsolete fusco-fasciatis, antennis pedibusque testaceis; antennis perabrupte clavatis, clava magna circulari 2-articulata, articulo apicali quam penultimus valde majori; prothorace fortiter transverso, antice angustato, supra minus crebre subobsolete punctulato, angulis posticis retrorsum directis sat acutis; elytris confertim subfortiter punctulatis; prosterni sulcis circularibus. Long., 1 l.; lat., $\frac{1}{2}$ l. (vix).

The antennæ and sternal cavities of this species are those of a typical *Cryptorhopalum*; among its congeners presenting these characters it is the only one known to me having bicolorous elytra with their pilosity unicolorous.

Central Australia; Oodnadatta.

C. (?) quadrifasciatum, sp. nov. Ovale, minus latum; minus nitidum; supra pilis cinereis vestitum, his in elytris fascias basalem apicalem et 2 dorsales formantibus; nigrum, antennis pedibusque ferrugineis; antennarum clava sat elongata, 3-articulata; prothorace fortiter transverso, antice angustato, supra subtilius sat crebre punctulato, angulis posticis retrorsum directis sat acutis; elytris confertim sat aspere subfortiter punctulatis; prosterni sulcis ut *Anthreni* (anticis, transversim positis). Long., $1\frac{1}{3}$ l.; lat., $\frac{2}{3}$ l.

Easily distinguishable from its immediate allies by the ashy pilosity of its elytra being placed in four zones—basal, ante-median, postmedian, and apical.

Central Australia; Oodnadatta.

C. terzonatum, sp. nov. Ovale; minus latum; sat nitidum; supra pilis cinereis ornatum, his in pronoto latera versus

condensatis et maculas 3 (2 discoidales, 1 in lobo postico) formantibus, in elytris fasciam antemedianam macularem (hac suturam haud attingenti) maculam postmedianam lateralem et maculas 2 anteapicales (his transversim sitis) formantibus; piceum, antennis pedibusque ferrugineis; antennarum clava 3-articulata; prothorace fortiter transverso, antice angustato, subtiliter minus perspicue punctulato, angulis posticis retrorsum directis sat acutis; elytris squamose vix aspere (sed apicem versus asperrime) punctulatis; prosterni sulcis ut *Anthreni* (anticis, transversim positus). Long., 1 l.; lat., $\frac{3}{10}$ l.

This very small insect belongs to what I have called Section II of *Cryptorhopalum*. It is easily distinguishable from the others of the same section by the disposition of the white pilosity of its upper surface which forms an ante-median fascia touching the lateral margins and widely interrupted on either side of the suture, a small spot on either side close to the lateral margin, and a row of four spots placed arcuately across the elytra a little before the apex.

Queensland; Townsville (Mr. F. P. Dodd).

ANTHRENUM.

Of the seven species found in Australia that stand under this name only three are correctly placed there—viz., *ocellifer*, Blackb. and the two introduced species *varius*, Fab., and *museorum*, Linn. I may say in passing that likely as *museorum* is to occur in Australia I have no evidence of its occurrence beyond its mention in Masters' Catalogue; all the *Anthreni* that I have seen bearing the name are *varius*, Fab.—which is the great pest of Australian museums. *A. nigricans*, Macl., is (as noted above) a *Thaumaglossa*. *A. australis*, Hope, and *Flindersi*, Blackb., belong to the aggregate which I have treated provisionally above as a section of *Cryptorhopalum*, but which undoubtedly represents a distinct genus intermediate between *Cryptorhopalum* and *Anthrenus*, having the vestiture of the former and antennæ and antennal cavities as in the latter. As already noted I refrain from founding a new genus for them only because I am not sure that a name may not have already been given to congeners from some other country. I have chosen *Cryptorhopalum* for their temporary location because most of them have already been placed there by Reitter. *A. Flindersi*, Blackb., is I think a synonym of *Cryptorhopalum confertum*, Reitt. Owing to its antennal structure I did not (when I described it) consider the possibility of its having been previously described as a *Cryptorhopalum*. *A. socius*, Lea, is certainly not an *Anthrenus*, its vestiture being described as consisting of hairs, Lea does not

give sufficiently exact details of the antennal cavities, tarsal structure, &c., to allow of much more than a guess as to the genus of his insect—but the details he gives are inconsistent with its being an *Anthrenus* or a *Cryptorhopalum* or congeneric with the species referred to above as intermediate between those two genera. I suspect it is a *Trogoderma*. *A. australis*, Hope, is fully discussed above under *Cryptorhopalum*.

BYRRHIDÆ.

MORYCHUS.

I find that I was in error in (doubtfully) attributing to *Byrrhus* the two species which I described under the names *B. torrensensis* and *B. raucus*. The original specimens of the former were much encrusted with some extraneous matter and the examination of subsequently captured examples has satisfied me that the position of the tarsi—laid back against the tibiæ—which led me to associate the species with *Byrrhus* was due to this extraneous matter having made them cohere to their tibiæ. *B. torrensensis* therefore should be transferred from *Byrrhus* to the allied genus *Morychus*. It is a winged insect and its tarsi are devoid of well-defined lamellæ on the undersurface, being very similar to the tarsi of the European *M. æneus*, Fab. The other species referred to (above) is discussed in the following note.

PEDILOPHORUS.

Byrrhus raucus, Blackb., belongs to *Pedilophorus*—which Lacordaire and Erichson regard as a subgenus of *Morychus*—being wingless and having a very long lamella under the third joint of its hind tarsi. In Masters' Catalogue *Morychus heteromerus*, King, is referred to *Pedilophorus*—I suppose either because it has been ascertained to belong to that aggregate as distinguished from the typical form of *Morychus* (I do not think any note to that effect has been published) or on the ground that *Pedilophorus* as a name has priority over *Morychus*. It certainly is the older name but Lacordaire objected to it on the ground that it was founded on a specific rather than a generic character. I hesitate to regard this as a valid reason for discarding the claim of the name to priority—but I see no reason why both names should not stand as the differences between the respective insects to which they are applied seem to be well marked and important. Regarding *Morychus heteromerus*, King, I am in some perplexity. The description of it is most unsatisfactorily brief, but it is certainly very distinct from all the *Byrrhidæ* known to me. If King's statement that its tarsi are heteromerous is not an error of observation I should expect to find that it is not really a *Byrrhidæ*.

MICROCHÆTES.

The number of species that have been attributed to this genus is six, but only four of them seem to be rightly placed there. *M. costatus*, Macl., is stated by its author to represent in all probability a new genus and its description does not read at all like that of a *Microchætes*. *M. minor*, King, is described as having tetramerous tarsi—which at once removes it from this genus—and its very small size and upper surface devoid of fascicles render it very unlikely to be a *Microchætes* even if its author was mistaken about the number of joints in its tarsi. Of the remaining four species the description of *M. (Byrrhus) australis*, Boisd., is perfectly useless and would fit any member of the genus that I have seen—except perhaps a species described below which is differently colored—while *M. sphaericus*, Hope, could certainly not be identified with confidence except by examination of specimens from the original locality—Western Australia; the few characters mentioned are found in several species before me. Thus there are only two known species of which any serious count can be taken as being intelligibly described, viz., *M. scoparius*, Er., and *fascicularis*, Macl. The former of these two is known to me, while the description of the latter mentions a row of five fascicles behind the transverse furrow on the pronotum—a character that distinguishes it from all that I have seen of the genus. I have, however, some specimens kindly given me by Mr. Lea under the name of *fascicularis*, Macl., and presumably named by comparison with the type—but they have only the four fascicles attributed to *M. sphaericus*, Hope, and present in several of the species before me. The presence of a fifth fascicle on the row on the pronotum would be a remarkable character as it would have to be on the centre line of the segment and consequently would interrupt the smooth dorsal space that exists in even the most strongly tuberculate of the species before me. The following is a tabular statement of the characters of the species known to me.

- | | | |
|-----|--------------------------------------------------------------------------------|------------------------------|
| A. | Elytra with fascicles between the seventh interstice and the lateral margin. | |
| B. | Puncturation of metasternum coarse in front but much finer behind | <i>fascicularis</i> , Macl.? |
| BB. | Puncturation of metasternum even or nearly so. | |
| C. | Puncturation of metasternum extremely coarse | <i>solidus</i> , Blackb. |
| CC. | Puncturation of metasternum very much finer | <i>scoparius</i> , Er. |
| AA. | No fascicles on the elytra beyond the fifth interstice | <i>nigrovarius</i> , Blackb |
| AAA | The seventh interstice of the elytra is the last fasciculate interstice | <i>coloratus</i> , Blackb. |

M. solidus, sp. nov. Latus; convexus; nitidus, sed indumento opaco squamoso tectus; piceo-niger, sed indumento cinerascenti; supra setis erectis castaneis vestitus, his hic et illic condensatis (partim in tuberculis partim in superficie dorsali positis); prothorace valde transverso, antice fortiter angustato, supra in parte mediana antica sat fortiter compresso-elevato, trans medium profunde sulcato, pone sulcum transversim 4-fasciculato; elytris striatis, interstitiis convexis, passim (parte apicali sexta excepta) sat crebre tuberculatis et fasciculatis; sternis et coxis posticis grosse sat crebre sat æqualiter punctulatis. Long., 2 l.; lat., $1\frac{1}{2}$ l.

As I have only one specimen of this insect I have not subjected it to the removal of the indumentum covering its upper surface. It is, however, distinguishable from all the others before me by—in combination—its dark under surface, its elytra having their whole surface except the extreme apex studded with confused tubercles and fascicles of castaneous setæ, and its sterna and hind coxæ extremely coarsely and somewhat evenly punctulate. A small abrasion of the indumentum on the elytra reveals the surface as crenulate-striate with strongly and roundly elevated interstices. The fascicles and tubercles of the elytra are so distributed that when the insect is looked at from behind there seems to be a very deep wide furrow across the elytra somewhat behind the middle. It is allied to *M scoparius*. Er., and to the species sent to me by Mr. Lea as *fascicularis*, Macl., but differs from both of them by, *inter alia*, the striæ of the elytra being crenulate and their interstices strongly convex the very coarse even puncturation of the sterna, &c.

Queensland.

M. nigro-variatus, sp. nov. Ovalis; minus latus; sat convexus; subnitidus; piceo-niger, sed squamis opacis cinereis dense vestitus, antennis pedibusque plus minusve dilutioribus; supra setis erectis nigricantibus et nonnullis castaneis hic disperse illic fasciculatim ornatus, nullo modo tuberculatus; prothorace valde transverso, antice fortiter angustato, supra in parte mediana antica minus fortiter compresso-elevato, trans medium late leviter sulcato crebre minus fortiter punctulato haud fasciculato; elytris sat fortiter punctulato-striatis, puncturis in striis sat grossis, interstitiis subtilissime punctulatis suturam versus planis extrorsum gradatim magis convexis (2° postice, 3° antice 5° toto fasciculas elongatas et nonnullas quadratas ferentibus; sternis et coxis posticis confertim minus fortiter sat æqualiter punctulatis. Long., $1\frac{2}{3}$ l.; lat., 1 l.

Until the squamose indumentum has been removed the sculpture of this species is scarcely discernible, although the

elytra appear finely striate, the striæ scarcely punctulate. The fascicles of setæ are confined to the elytra where they have a dark velvety appearance. On the second interstice there are two or three quadrate fascicles considerably behind the middle, on the front two-thirds of the third interstice two or three elongate fascicles, on the fifth interstice two elongate and two quadrate fascicles placed alternately. Differs from all its congeners known to me by the fascicles of erect setæ being entirely confined to the inner half of each elytron.

S. Australia.

M. coloratus, sp. nov. Latus; convexus; minus nividus; piceoniger, sed indumento squamoso opaco tectus, corpore subtus pedibus et nonnullorum exemplorum elytris latera versus rufis; supra setis erectis vestitus, his hic et illic condensatis (partim in tuberculis partim in superficie dorsali positis); prothorace valde transverso, antice fortiter angustato, supra in parte mediana antica sat fortiter compresso elevato, trans medium late leviter sulcato, pone sulcum transversim obsolete tuberculato-fasciculato; elytris crenulato-striatis, interstitiis vix convexis (3°, 5°, 7° que pone medium obtuse vix tuberculatis, fasciculis in interstitiis 2°—7° positis; sternis minus crebre (coxis posticis magis crebre) sat fortiter punctulatis. Long, 1 $\frac{3}{8}$ l; lat, 1 $\frac{1}{3}$ l. (vix).

The second elytral interstice bears a moderately large fascicle considerably behind the middle and a very small one still nearer the apex—between these last two there are some whitish scales in very fresh specimens; the third interstice has a small basal fascicle, about three small fascicles almost confluent ending with about the first quarter of the interstice, a small one somewhat in front of the middle, about seven small subconfluent ones ending a little behind the middle, a scarcely perceptible one considerably behind the middle and a well defined one near the apex; the fourth interstice has a scarcely defined fascicle at the top of its hind declivity; on the fifth interstice there is a moderate then a small then a large then a small fascicle, beginning a little in front of and ending considerably behind the middle—the hindmost fascicle of the third interstice might be reckoned as belonging to this series as the third and fifth interstices coalesce behind; the sixth interstice has a scarcely defined fascicle near the apex; the seventh interstice has a large fascicle near the top of its hind declivity and a smaller one still further back and the eighth interstice is like the sixth. These fascicles seem constant in perfectly fresh specimens; in specimens not quite fresh the fourth, sixth, and eighth interstices are devoid of any trace of fascicles. The tubercles of the elytra are only visible in abraded

specimens and are merely slight increases on a short space—behind the middle—in the width and convexity of the third fifth and seventh interstices. The red colouring of the under-surface and legs together with the dark coloring—except a patch of whitish scales about the top of the hind declivity of the elytra in non-abraded specimens—distinguishes this species readily. Otherwise it differs from its described congeners as follows, *inter alia*—from *nigro-varius*, Blackb., by the presence of fascicles on the external half of each elytron, from *solidus*, Blackb., by the considerably finer and less close puncturation of the sterna, from the species referred to above as *fascicularis*, Macl., by its prosternum being very much more closely punctulate than its metasternum, and from *scoparius*, Er., by there being no well defined fascicles on its elytra outside the seventh interstice and by the coarse crenulation of its elytral striæ.

S. Australia; Eyre's Peninsula, in seaweed.

HETERO CERIDÆ.

Australian species of two genera appertaining to this Family are known—the old widely distributed genus *Heterocerus* and *Elythomerus* (founded by Mr. C. O. Waterhouse for a Queensland species) differing from *Heterocerus inter alia* by its contiguous front coxæ. I have not seen an example of the latter.

HETERO CERUS.

Of this genus Australian species have been described under six names, on which notes will be found below together with descriptions of two new species. The *Heteroceri* are most difficult to deal with on account of their extremely close superficial resemblance *inter se* and their liability to variation in colour and markings. The most satisfactory distinctive characters seem to be sexual. Unfortunately the description of the species first recorded as Australian—*H. Mastersi*, Macl.—does not mention a single really specific character. The description (next published) of *H. Australasiæ*, Waterh., is defective in the omission of any information as to the sex of the specimen described, and its sexual characters if it was a male. I have taken a species on the banks of the Murray which may possibly be a variety of it, and which therefore I forbear to describe as new. I do not find any clearly defined discrepancy between this S. Australian species and Waterhouse's description except that the latter indicates the sutural infuscation as confined to the hinder half of the elytra while in the former it attains the base and is much dilated in the scutellar region where it is at its darkest. I take my two specimens to be male and female, the one having the head narrower than the other, with the clypeus strongly—in the other less strongly—emarginate in front and furnished with two teeth

so minute as to be only noticeable when carefully looked for—of which I cannot find any trace in the other. This species resembles *H. multimaculatus* in outline but its elytra are much more finely punctured—more finely indeed than in any other of the *Heteroceri* before me. For the determination of the Australian species of this genus I have found the number of spines on the external margin of the front tibiæ a valuable and invariable character. All of them known to me belong to the section of the genus having the base of the pronotum more or less margined, and I do not find in any of those of which I can positively identify the male any peculiarity likely to be sexual in the arched ridge of the basal ventral segment. On the other hand all the specimens that seem to be decidedly males have good sexual characters on the head. The following tabular statement of the most conspicuous distinctions among the species known to me is not altogether satisfactory inasmuch as I have had to rely upon the coloring to distinguish *Victoriæ*, Blackb., from two allied species. There are other differences, however, which do not lend themselves to tabulation and I do not doubt that the male of *Victoriæ*—unknown to me—has well-defined frontal characters. The descriptions of *H. Mastersi*, Macl., and *Australasiæ*, Waterh., do not supply the information that would enable me to place them in this tabulation. I may add that the striation of the elytra seems to be in this genus quite unreliable for the determination of species. I have specimens with evident striation taken in company with—and showing no other difference from—specimens whose elytra are non-striate.

- | | | |
|-----|---------------------------------------------------------------------------------------------------------|-------------------------------|
| A. | Front tibiæ with 9 to 10 external spines | |
| B. | Elytra finely and closely punctulate. | |
| C. | Form narrow and elongate; elytra conspicuously narrowed behind the shoulders | <i>multimaculatus</i> Blackb. |
| CC. | Form normal | |
| D. | The light coloring of the elytra not reaching base except on lateral margin | |
| E. | Clypeus of male with two very short slender spines in front between which the outline is not emarginate | <i>Flindersi</i> , Blackb. |
| EE. | Clypeus of male with two blunt teeth in front between which the outline is emarginate | <i>indistinctus</i> , Blackb. |
| DD. | A subsutural vitta of light colour reaches the base of the elytra | <i>Victoriæ</i> , Blackb. |
| BB. | Elytra much more strongly punctulate than in the other species | <i>largensis</i> , Blackb. |
| AA. | Front tibiæ with less than nine external spines | <i>debilipes</i> , Blackb. |

H largensis, sp. nov. Robustus; modice elongatus; sat nitidus; setis erectis sat elongatis vestitus; niger, antennarum basi mandibulis prothoracis lateribus elytris (notulis nonnullis

piceis exceptis) tibiis tarsis et abdominis lateribus rufo-brunneis; capite pronotoque opacis confertim subtiliter punctulatis; hoc postice marginato, ad latera minus fortiter rotundato; elytris sat fortiter subrugulose punctulatis (exempli typici) substriatis, pone humeros parum angustatis; tibiis anticis 10-spinosis.

Maris clypeo antice dentibus 2 parvis acutis armato, inter dentes sat profunde emarginato. Long., 2 l.; lat., $\frac{4}{5}$ l.

Fem. latet.

This species is very distinct from all its congeners known to me by the considerably longer pubescence of its upper surface and the much stronger puncturation of its elytra. The piceous marks on the elytra are—in the type—a small blotch round the scutellum, and on each elytron two elongate basal blotches between the scutellum and the lateral margin an irregular oblique median blotch and a post-median blotch resembling roughly the letter U with its convexity directed forward. The teeth on the front of the clypeus of the male, though not actually large are decidedly larger than those of *H. indistinctus*, Blackb., and are well elevated with a sharp free point directed forward above the labrum, while in *indistinctus* they are mere angular extensions of the outline of the clypeus scarcely raised above the surface of the labrum. The corresponding projections in *Flindersi*, Blackb., are very short and slender *spines*, while in *debilipes*, Black.—described below—they are more like those of the present species but somewhat smaller and less sharply pointed forward.

S. Australia (bank of a Creek near Largs Bay.)

H. debilipes, sp. nov. Sat elongatus; sat convexus; pone humeros parum angustatus; minus nitidus; pube brevi erecta vestitus; obscure ferrugineus vel picescens, antennis palpis mandibulis pedibusque testaceis, elytris testaceo-brunneis notulis nonnullis piceis ornatis; capite pronotoque opacis confertim subtilissime punctulatis; hoc postice subtiliter marginato, ad latera fortiter rotundato; elytris subtiliter confertissime subasperatim punctulatis, vix vel nullo modo striatis; tibiis anticis 8-spinosis.

Maris clypeo profunde subtriangulariter emarginato, antice bidentato, dentibus lamina compressas erectas nonnihil simulantibus.

Feminæ clypeo haud dentato. Long. $1\frac{1}{2}$ l.; lat., $\frac{3}{5}$ l.

The distinctive characters of this species seem to be—small size, convex subcylindric form, extremely close elytral puncturation, extremely deep emargination of the front of the clypeus (best seen when viewed obliquely from in front) and small number of spines on the front tibiæ. The puncturation of the elytra is

closer than in any other Australian *Heterocerus* known to me except that mentioned above as possibly *H. Australasiae*, Waterh., in which the puncturation is somewhat closer and correspondingly finer but not at all asperate. The small number of spines on the front tibiae is constant in the five specimens that I have seen and is certainly a reliable character. The clypeal processes of the male are larger than in the other species of which I know the male with certainty except *H. largensis*, Blackb. They have somewhat the appearance of small compressed laminae projecting from the front of the clypeus with their front face vertical and their upper outline forming an exact right angle with their front outline—viewed from the side—but not actually *toothed*. As, however, with sexual characters of this description in many other insects, there is a certain degree of variability in the size and sharpness of outline in this structure. The dark markings on the elytra (fairly constant on the specimens examined) are—one round the scutellum, two between the scutellum and the lateral margin (these, confluent on the base), a transverse median irregular (in some examples interrupted) blotch, and a zig-zagged transverse post-median blotch which is connected at its inner extremity with the inner extremity of the median blotch by a subsutural line.

Central Australia.

H. multimaculatus, Blackb. The type of this insect which is still unique is apparently a female; its clypeus resembles that of the female of *H. debilipes*, Blackb., from which it differs by its larger size, different markings, much less close elytral puncturation, more elongate form—with elytra narrowed behind the shoulders—and more numerous tibial spines. In my description of it I called the puncturation of its elytra “much” closer than in *H. Flindersi*, Blackb.; but I think the phrase was somewhat too strong, and “evidently” should be substituted for “much.”

H. Flindersi, Blackb. The type of this insect is a female. I have subsequently found the male, the sexual characters of which have been indicated above under the heading of *H. largensis*, Blackb., and also in the tabulation. In my experience the commonest and most widely distributed Australian *Heterocerus*.

H. indistinctus, Blackb. The sexual male characters of this species are indicated above under the heading of *H. largensis*, Blackb., and also in the tabulation.

H. Victoriae, Blackb. My two examples of this insect appear to be females. The clypeus is widely and decidedly emarginate in front and the labrum only feebly convex. The markings of the elytra are very distinct from those of the other Australian *Heteroceri* known to me.

BUPRESTIDÆ.

PARACUPTA.

P. bellicosa, sp. nov. Elongato-oblonga, sat angusta; capite nigro-viridi; pronoto nigro-violaceo, ad latera sulco lato aureo-viridi impresso; elytris nigro-viridibus, sutura indeterminate violacea, sulco sublaterali aureo-viridi ad apicem vix abbreviato impresso; corpore subtus aureo-viridi; antennis violaceis; pedibus aureo-viridibus; partibus impressis (capitis prothoracisque sulco mediano excepto) pube subtili flava confertis; capite longitudinaliter concavo, sat grosse subrugulose punctulato; prothorace leviter transverso, a basi antrorsum continue angustato, sparsius minus fortiter punctulato, sulco longitudinali mediano integro impresso, lateribus fere rectis; scutello sat parvo; elytris haud costulatis, subtiliter subseriatim (inter sulcum sublateralem et marginem magis fortiter vix seriatim) punctulatis, interstitiis sparsim subtiliter punctulatis, sutura pone scutellum alte depressa, lateribus in parte postica tertia dentibus sat magnis circiter 8 marginatis, sutura ad apicem spiniformi; prosterno medio postice longitudinaliter sulcato fere lævi, antice grosse minus crebre punctulato, prosterno alibi irregulariter (hic confertim subtiliter, illic sparsim grosse) punctulato; metasterno medio sparsim grosse (alibi confertim sat subtiliter) punctulato; coxis posticis intus sparsissime extus confertim, abdomine medio sparsissime partibus lateralibus confertim, punctulatis; segmentis ventralibus latera versus late impressis et flavo-pubescentibus.

Maris (?) segmento ventrali apicali late profunde feminae (?) anguste minus profunde emarginato. Long. (maris ?) $8\frac{1}{2}$ l. (feminae ?) $11\frac{1}{2}$ l.; lat. (maris ?) $2\frac{2}{3}$ l. (feminae ?) $3\frac{2}{3}$ l.

The nearest previously described Australian species in respect of markings is *P. albivittis*, Hope, from which, however, the present insect is extremely distinct. In form it is much narrower and more acuminate behind; the head and pronotum are much less closely and more finely punctulate; the median longitudinal sulcus of the pronotum is entire, wide, and deep; the serration of the hind part of the lateral margin of the elytra is much stronger, and their lateral vitta is continuous to the base, &c., &c. I suppose there can be little doubt that the smaller specimen with its apical ventral segment more deeply emarginate is the male.

N. Queensland; sent by Mr. C. French.

APPENDIX.

The following two species have come under my notice while the preceding pages were going through the press.

CUCUJIDÆ.

LÆMOPHLÆUS.

L. Victoriae, sp. nov. Mas. Elongatus; sat angustus; sat parallelus; nitidus; subpubescens; rufo-ferrugineus, elytris ante apicem transversim infuscatis; capite quam prothorax vix angustiori, sat convexo, vix inæquali, subtiliter crebrius-punctulato, clypeo antice leviter subrotundato; antennis quam corpus haud brevioribus, articulis 9° — 11° quam ceteri sat longioribus (inter se sat æqualibus, quam latioribus multo longioribus); prothorace quam longiori paullo latiori, postice vix angustato, supra crebre minus subtiliter punctulato, utrinque unistriato, lateribus parum arcuatis, angulis anticis (superne visis) vix bene definitis nullo modo extrorsum directis posticis sat acute rectis; elytris (certo adspectu) striis dorsalibus 3 (ut *L. ferruginei*, Steph.) impressis, latera versus tenuiter carinatis, interstitiis punctulatis.

Feminae capite angustiori, antennis quam corpus paullo brevioribus. Long., 1 l.; lat., $\frac{3}{10}$ l.

In the tabulation of *Læmophlæus* (above) this species falls beside *L. Lindt*, Blackb., from which it differs *inter alia* in its antennæ—those of the male being fully as long as the body, and those of the female quite three-quarters of the length of the body. As it is just possible that I have not seen the male of *Lindi* it should be noted that the antennæ of the female of this species are much longer than those of the female of *Lindi*, with the apical three joints very much more elongate. The front angles of the prothorax are slightly more defined than those of *L. Lindi* (and *L. ferrugineus*, Steph.). The following species of those not known to me may possibly have front angles of prothorax not unlike those of the present species; therefore I note that in that case the present species differs *inter alia* from *L. conterminus*, Olliff, by its much less transverse prothorax, from *L. contaminatus*, Gr., by its testaceous antennæ, from *L. Leachi*, Gr., by the very elongate terminal joints of its antennæ.

Victoria (sent by Mr. French).²

SILVANUS.

S. similis, Wesm. Mr. French has sent me for determination an example (from P. Mackay, Queensland) of a *Silvanus* which I cannot separate specifically from this European insect. It has not been previously recorded as Australian.